BASIC TRANING A **TC PROGRAMME

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ELECTRICIAN GENERAL

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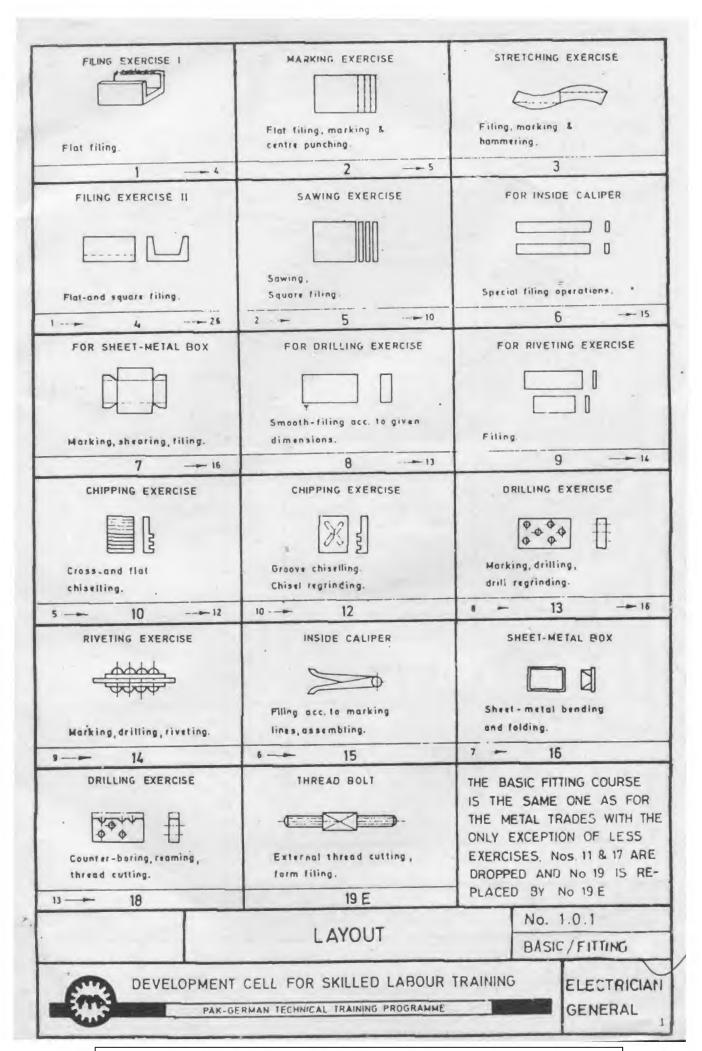


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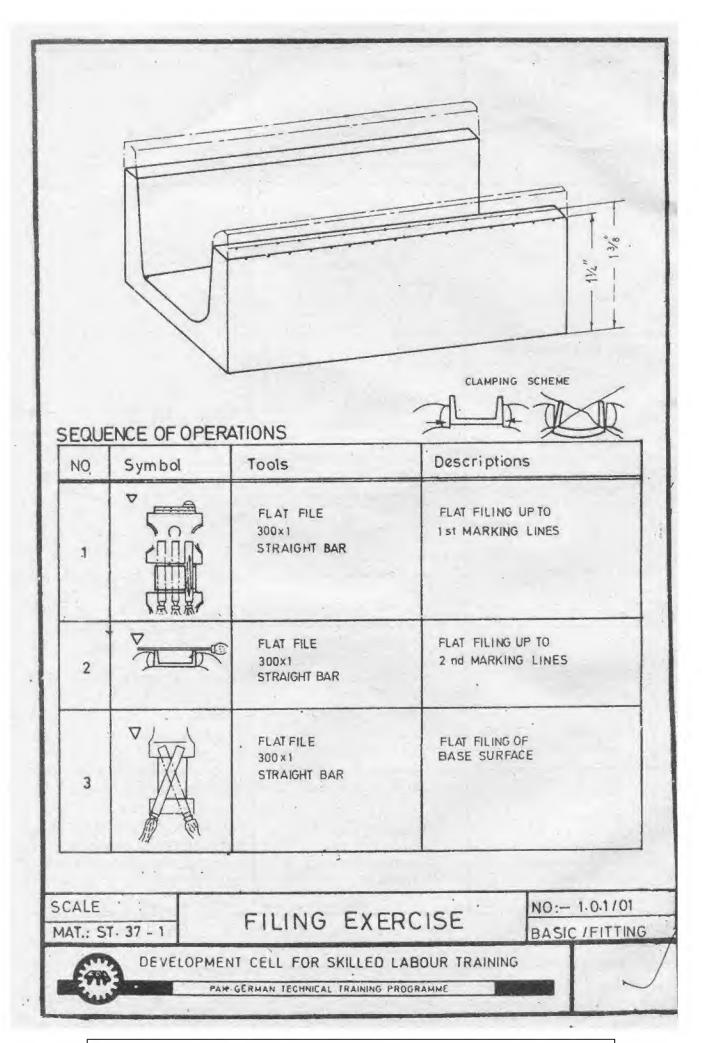
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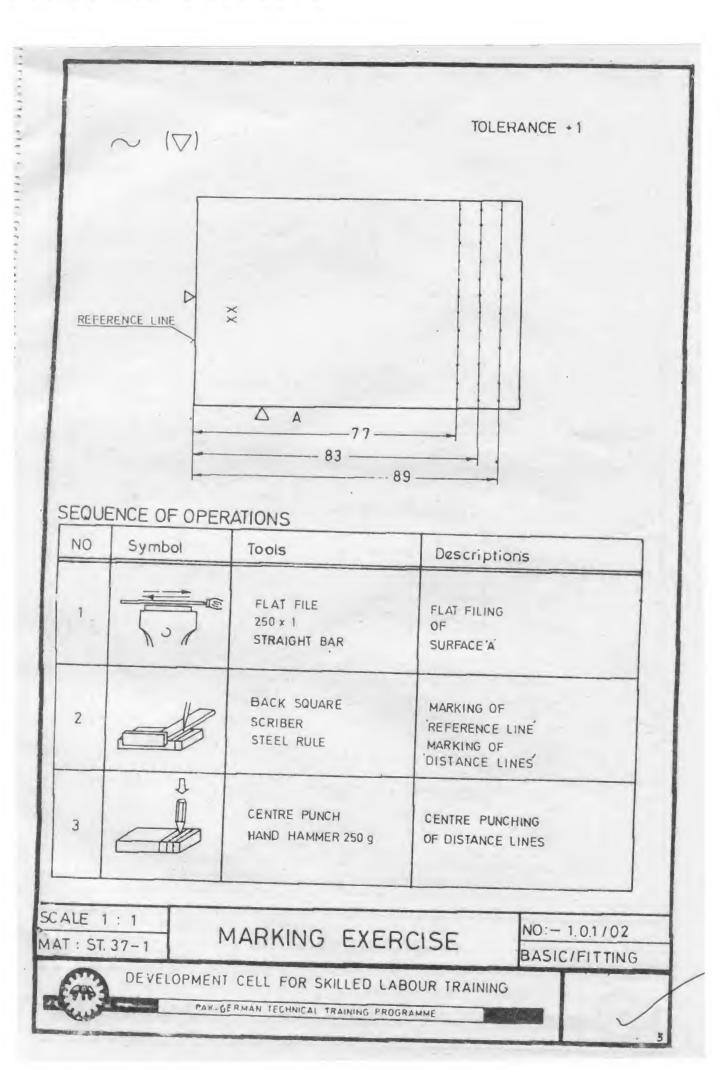




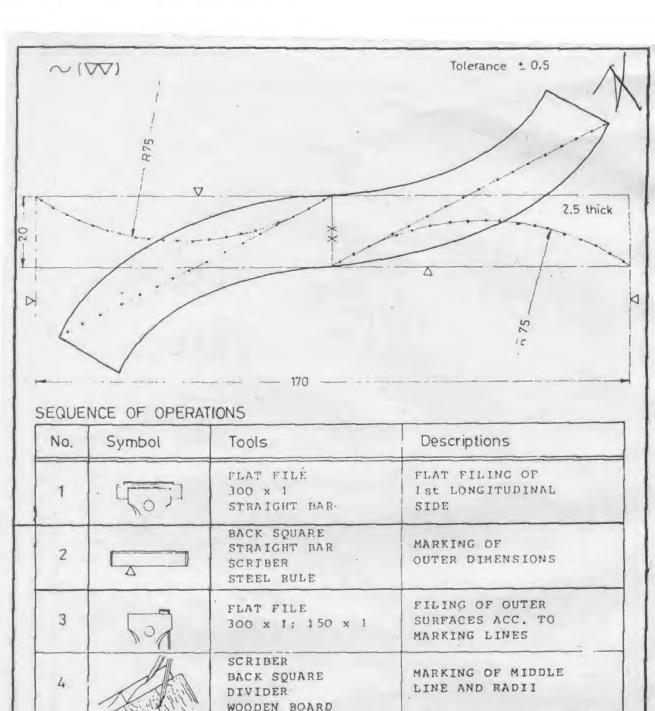
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1	. [[0]]	FLAT FILE 300 x 1 STRAIGHT BAR-	FLAT FILING OF 1st LONGITUDINAL SIDE
2		BACK SQUARE STRAIGHT BAR SCRIBER STEEL RULE	MARKING OF OUTER DIMENSIONS
3	507	FLAT FILE 300 x 1; 150 x 1	FILING OF OUTER SURFACES ACC. TO MARKING LINES
4		SCRIBER BACK SQUARE DIVIDER WOODEN BOARD	MARKING OF MIDDLE LINE AND RADII
5		CENTRE PUNCH HAND HAMMER 2.50 g	CENTRE PUNCHING OF RADII
6		HAND HAMMER STRAIGHTENING PLATE STRAIGHT BAR	CURVING OF THE MATERIAL
7		TION 6 ON THE 2nd HALF LES FOR CORRECTION AFT	

SCALE 1:1

MAT. MILD STEEL

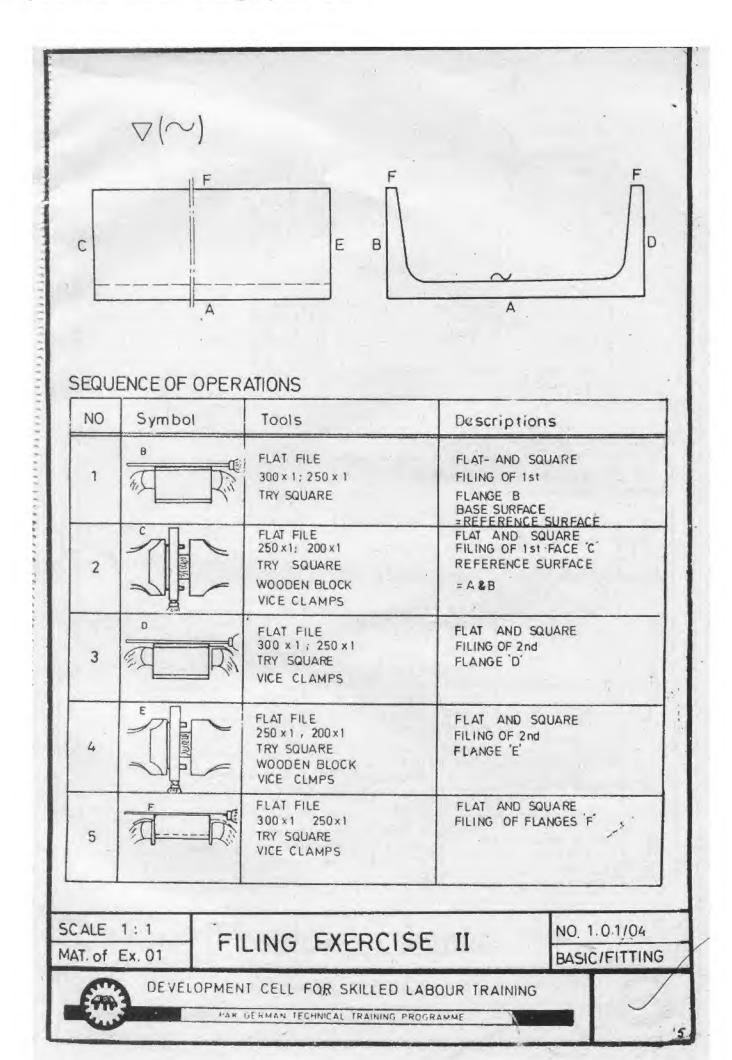
STRETCHING EXERCISE

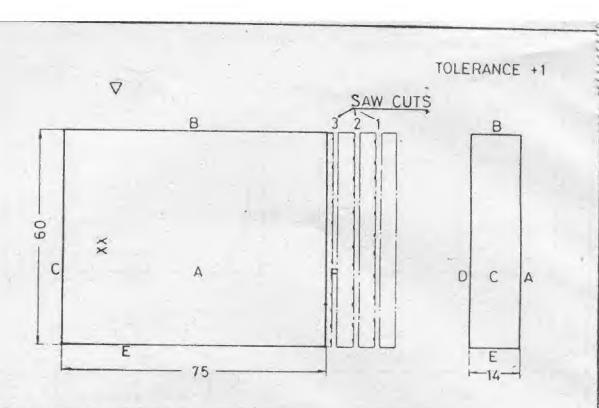
No. 1.0.1/68

BASIC FITTING

DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING I TOGRAMME





NO.	Symbol	Tools	Descriptions
1	12	THREE SQUARE FILE 150x1 HAND HACKSAW	NOTCH ENDS OF MARKING LINES WITH THREE SQUARE FILE. SAWING OF 1st AND 2nd CUT AS SHOWN.
2	3	THREE SQUARE FILE 150x1 HAND HACKSAW	SAWING OF 3rd CUT BY CLAMPING THE WORKPIECE IN HORIZONTAL POSITION.
3	AV	FLAT FILES 300x1; 200x1 TRY SQUARE	FLAT FILING OF SURFACE 'A'.
4	a A	FLAT FILES 300x1; 200x1 TRY SQUARE	FLAT- AND SQUARE FILING OF SURFACE 'B'.
5	CV AK	FLAT FILES 300x1; 200x1 TRY SQUARE VICE CLAMPS	FLAT- AND SQUARE FILING OF SURFACE 'C'
6	REPEAT OPERATIONS 3, 4 AND 5 FOR SURFACES D, E AND F. DON'T CHECK WITH TRY SQUARE AND STEEL RULE, WHEN MATERIAL IS CLAMPED IN THE VICE! CHECK DIMENSIONS WITH OUTSIDE CALIPER AND STEEL RULE.		

SCALE 1:1

MAT. of Ex. 02

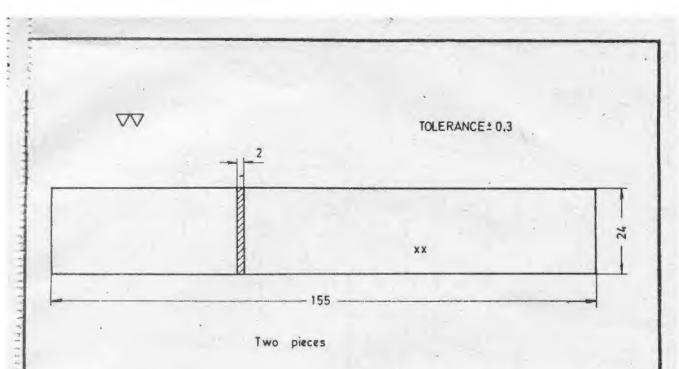
SAWING EXERCISE

NO:- 1.0 1/05

BASIC / FITTING



PAK: GERMAN TECHNICAL TRAINING PROGRAMME



Na	Symbol	Tools	Descriptions
1-		SMOOTH-CUT FILE	SMOOTHING OPERATIONS. MATERIAL ALLOWANCE FOR SMOOTH FILING O.1 TO O.2 MM.
2		FLAT FILES 300x1; 250x3 TRY SQUARE VERNIER CALIPER WOODEN PIECE, NAILS	FLAT FILING OF 1st BROAD SURFACE. HOLD THE WORK ON A WOODEN PIECE.
3		FLAT FILES 300x1; 200x1; 250x3 TRY SQUARE VERNIER CALIPER	FLAT AND SQUARE FILING OF 1st LONGITUDINAL SIDE.
4	COMPLETE THE WORK IN A SEQUENCE OF OPERATIONS AS DONE IN PREVIOUS EXERCISES. MIND SMOOTHING ALLOWANCE. USE VICE CLAMPS: ##		

SCALE .1:1 MAT. ST. 37-1

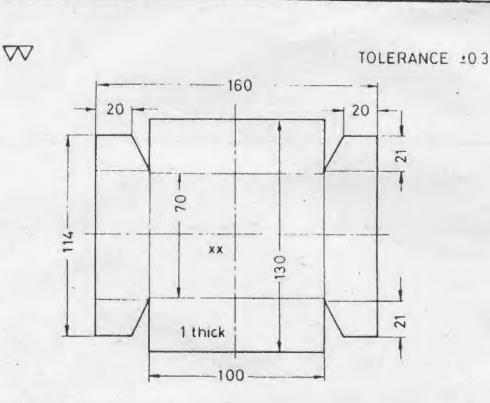
INSIDE CALIPER 1

NO:- 1 01/06

BASIC/FITTING

DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME



No.	Symbol	Tools	Descriptions
1	5.三	FLAT FILE 200x3 TRY SQUARE STEEL RULE HAND VICE	FILING OF SIDES 'A' & 'B' IN RIGHT ANGLE.
2	^ 8	MARKING TOOLS	LENGTH AND WIDTH MARKING MARKING OF THE SHAPE OF THE WORK.
3	A.	LEVER SHEAR	SHEARING OF LENGTH AND WIDTH. SHEARING OF SHAPE OF THE WORK ACCORDING TO MARKING LINES.
4		TRY SQUARE. STEEL RULE, HAND VICE, FILE 200x3, KEY FILE SET	COMPLETING THE WORK ACCORDING TO GIVEN . DIMENSIONS.
5	WHEN NUMBER I	PUNCHING, USE LIGHT	BLOWS.

SCALE 1: 2.5 3 MAT.: ST 10 %

SHEET METAL BOX 1

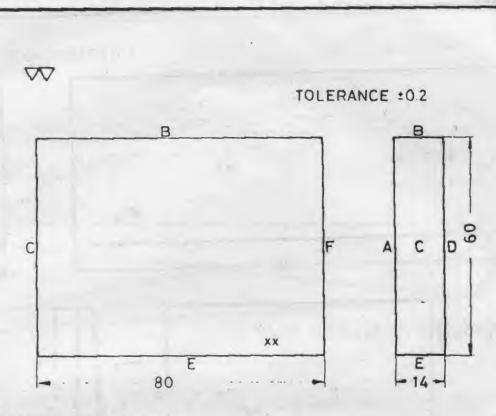
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BASIC / FITTING



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL THAINING PROGRAMME



No.	Symbol	Tools	Descriptions
1	\bigcirc	FLAT FILES 300x1; 200x1 TRY SQUARE, VERNIER CALIPER, VICE CLAMPS	FÉLING OF THE WORK ALL AROUND IN RIGHT ANGLES. MIND SMOOTHING ALLOW-ANCE.
2	~	FLAT FILES 250x3; 150x3 TRY SQUARE, VERNIER CALIPER, VICE CLAMPS	FINISHING OF SURFACE A' WITH SMOOTH FILES. USE CHALK FOR FINISH-ING.
3	~	FLAT FILES 250x3; 150x3 TRY SQUARE, VERNIER CALIPER, VICE CLAMPS	FINISHING OF SURFACE 'B IN RIGHT ANGLE TO SURFACE 'A'.
4	W. T.	FLAT FILES 250x3; 150x3 TRY SQUARE, VERNIER CALIPER, VICE CLAMPS	FINISHING OF SURFACE 'C IN RIGHT ANGLE TO SURFACE 'A' & 'B',
5	COMPLETE ALL OTHER SURFACES. CHECK THE DIMENSIONS WITH THE VERNIER CALIPER. DEBURR THE WORK PROPERLY.		

SCALE 1:1

MAT .. ST 37-1

DRILLING EXERCISE 1

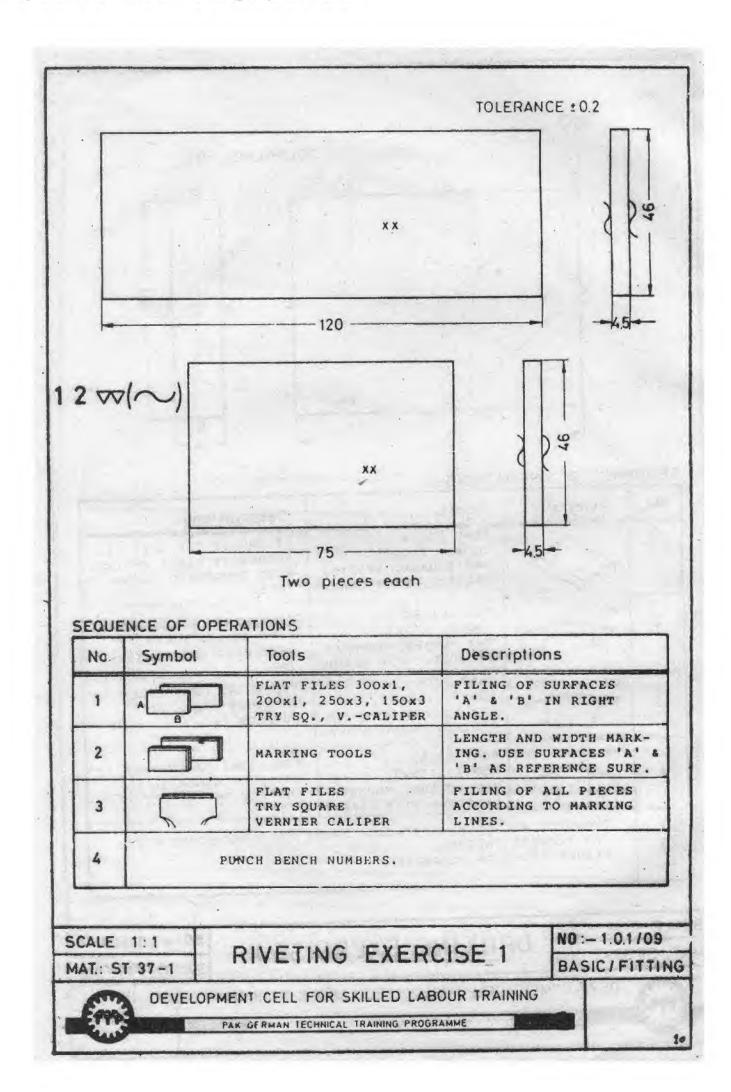
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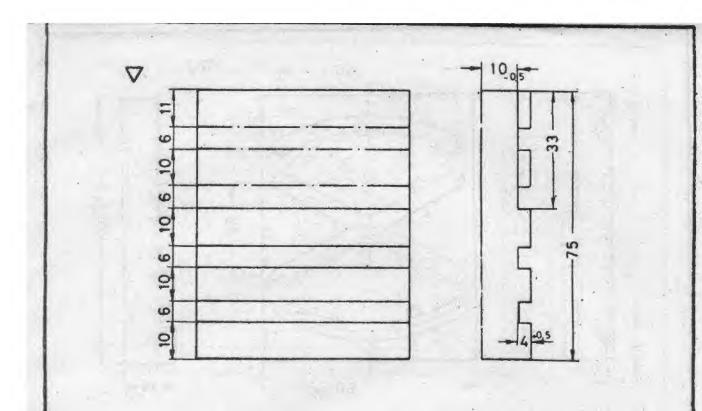
BASIC / FITTING



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

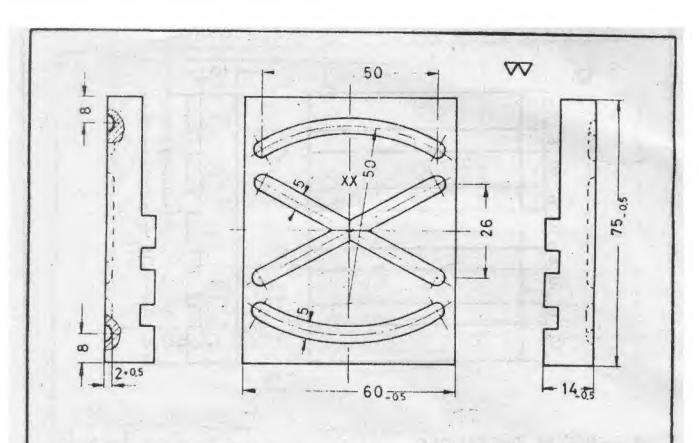
PAK-GERMAN IFCHNICAL TRAINING PROGRAMME





No.	Symbol .	Tools	Descriptions
1		MARKING TOOLS	MARKING OF NOTCHES
2		CROSS-CUT CHISEL HAND HAMMER 600 g STEEL RULE WOODEN BLOCK	CHIPPING OF NOTCHES
3		FLAT CHISEL HAND HAMMER 600 g STEEL RULE WOODEN BLOCK	CHIPPING OFF TWO RIBS
4	USE SAFETY S	CUTTING POINT WHILE CHIELD. BLOCK OF WOOD	HISELLING.

SCALE 1:1 NO:- 101/10 CHIPPING EXERCISE MAT. of Ex. 05 BASIC / FITTING DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING PAK-GERMAN TECHNICAL TRAINING PROGRAMME



No.	Symbol	Tools	Descriptions
1		MARKING TOOLS	MARKING OF GROOVES
2		GROOVE-CUT CHISEL HAND HAMMER 600 g STEEL RULE WOODEN BLOCK	CHIPPING OF CROSSED GROOVES
3		GROOVE-CUT CHISEL HAND HAMMER 600 g STEEL RULE WOODEN BLOCK	CHIPPING OF CURVED GROOVES
4	Name of the second	SMOOTH FILES VERNIER CALIPER TRY SQUARE VICE CLAMPS	SMOOTH AND SQUARE FILING ALL AROUND FINAL WORK

SCALE 1:1 MAT. of Ex. 10

CHIPPING EXERCISE

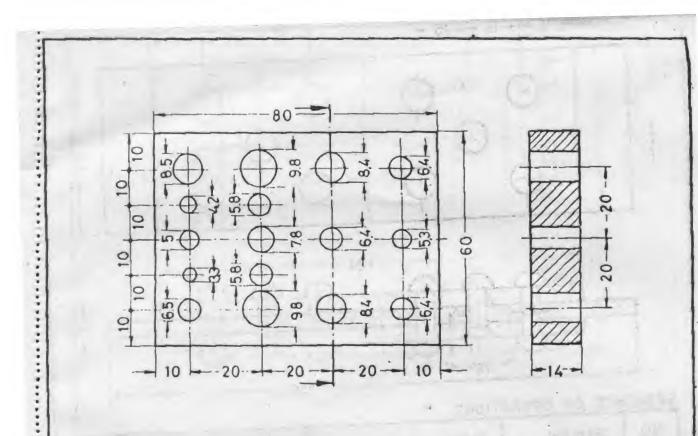
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BASIC/FITTING



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK GERMAN TECHNICAL TRAINING PROGRAMME



NO	Symbol	Tools	Descriptions
1		MARKING TOOLS	MARKING OF ALL CENTRE POINTS AND CONTROL CIRCLES
2		NACHINE VICE PARALLEL PIECES	PROPER CLAMPING INTO THE MACHINE VICE
3		TWIST DRILLING ACCORDING TO GIVEN DIMENSIONS	DRILLING OF HOLES. MIND THE R.P.M. AND FEED R.P.M. = V x 1000 D x \Re
4		COUNTER-SINK DRILL	DEBURRING OF ALL HOLES FROM BOTH SIDES.

SCALE 1:1

DRILLING EXERCISE 2

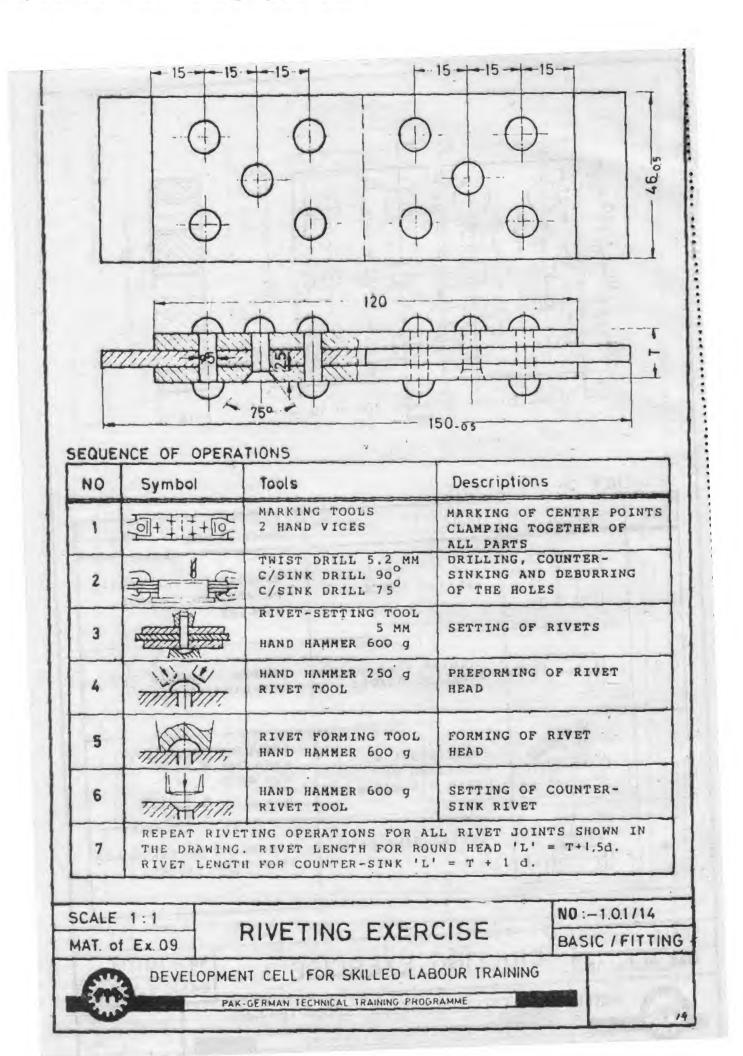
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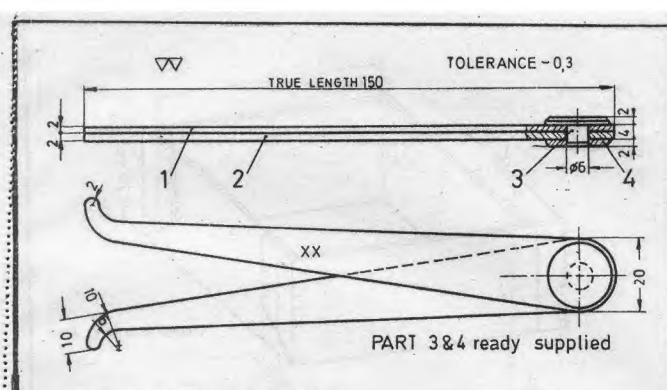
BASIC/FITTING



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

AK OF HMAN TECHLICAL THAINING PHOGRAMME





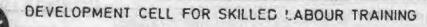
NO.	Symbol	Tools	Descriptions
1	MARKING (DF PART 1% 2 ACCORDING	TO GIVEN DIMENSIONS.
2		FILES, VICE CLAMPS	FILING OF PART 1 & 2 ACCORDING TO MARKING LINES.
3	1000	TWIST DRILL 6M.M.	ORILLING WITH PART 1& 2 CLAMPED TOGATHER.
4	- Anna	HAND HAMMER 250g.	RIVETING TOGETHER OF PART
5	FINAL WORK	, DEBURRING, NUMBER	

SCALE 1:1 MAT. of Ex. 06

INSIDE CALIPER

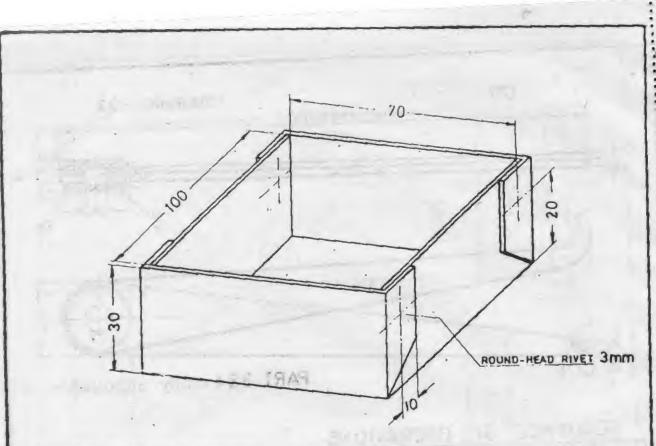
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BASIC / FITTING



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SEQUENCE OF OPERATIONS

NO.	Symbol	Tools.	Descriptions
1		HAND HAMMER 250 g TWO ANGLE IRON	BENDING OF THE 4 FLANGES
2		HAND HAMMER 250 g TWO ANGLE IRON	BENDING OF THE SIDES 100 MM LENGTH (WITHOUT FLANGES)
3	*	HAND HAMMER 250 g SHIM	COMPLETION OF BENDING WORK
4 .	MILL	MARKING TOOLS TWIST DRILL 3.2 MM HAND VICE	DRILLING, DEBURRING, RIVETING
5		FILES MEASURING AND CHECKING TOOLS	FILING, DEBURRING, FINAL CHECKING

SCALE 1:1 MAT. of Ex.07

SHEET METAL BOX

NO:- 1.0.1/16

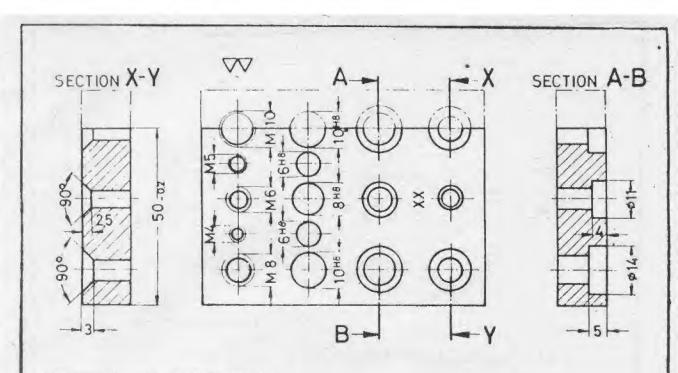
BASIC / FITTING



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

16.



NO.	Symbol	Tools	Descriptions .
1		CENTRE-BORE DRILL 6.4x11; 8.4x14 MACHINE VICE	COUNTER-BORING
2		COUNTER-SINK DRILL 90°	COUNTER-SINKING
3		THREAD TAPS M4, M5, M6, M8, M10 TAP-HANDLE	INSIDE-THREAD CUTTING
4		HAND REAMER 6 ^{H8} , 8 ^{H8} , 10 ^{H8} HANDLE	REAMING
5		COUNTER SINK DRILL MACHINE VICE	DEBURRING AND RETAPPING
6	TO THE STATE OF TH	MARKING TOOLS HAND HACKSAW FILES MEASURING TOOLS	MARKING, FILING, FINAL WORK

SCALE 1:1

MAT. of Ex. 13

DRILLING EXERCISE

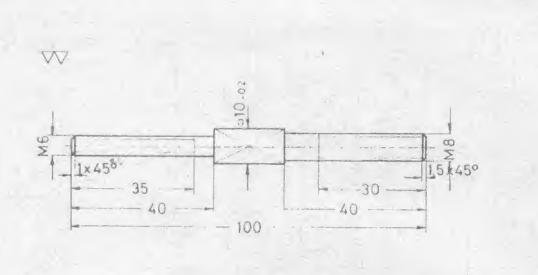
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THE MATERIAL WILL BE SUPPLIED BY THE TURNER SECTION.

SEQUENCE OF OPERATIONS

NO.	Symbol	Tools	Descriptions
1		FILES MEASURING- AND CHECKING TOOLS	FILING OF SQUARE 10 MM
2		DIE M 6	CUTTING OF OUTSIDE THREAD M6
3		DIE M 8	CUTTING OF OUTSIDE THREAD M8

SCALE 1: 1 MAT.: ST 37 - 1

THREAD BOLT FOR ELECTRICIAN ONLY

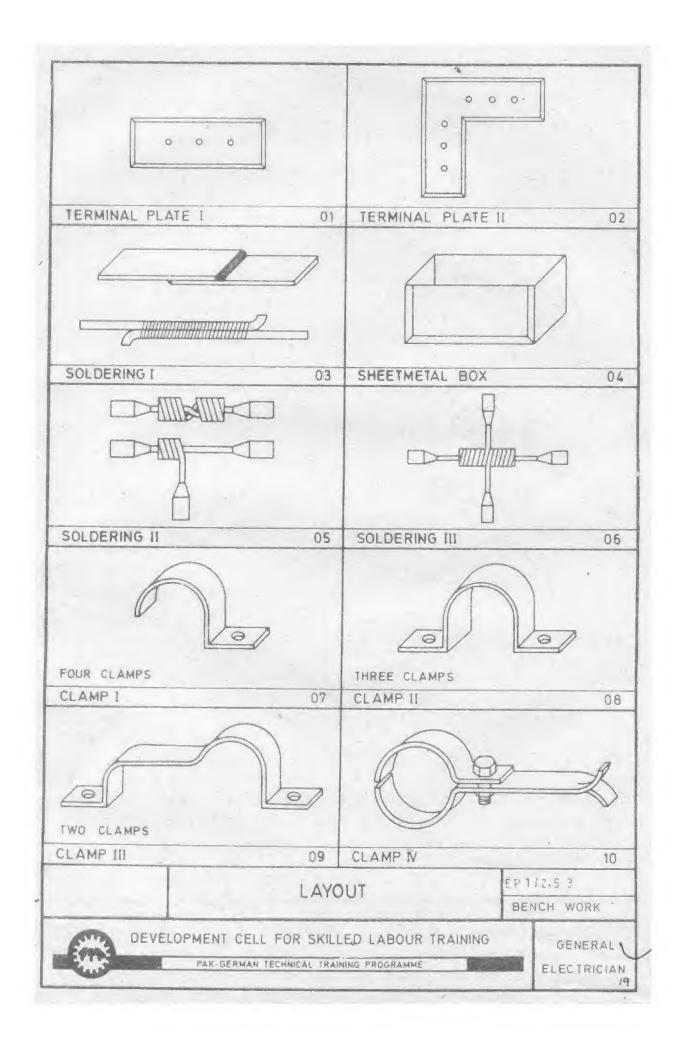
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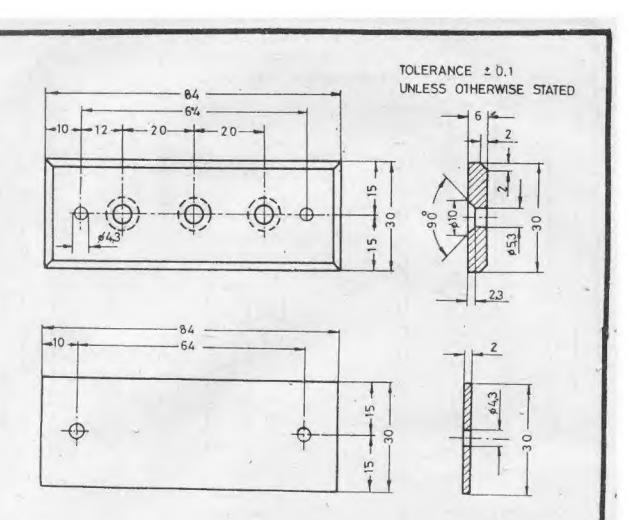


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MATERIAL

2 mm and 6 mm hardpaper plates "Pertinax"

Countersunk brass screws M 5x30, brass nuts M5, brass washers 5 mm PREPARATION OF TERMINAL PLATES

- 1. Check the material, mark the size of the plates and the centres of the holes according to drawing.
- 2. Saw the plates to approximate size.
- 3. Clamp both pieces together and drill the 4.3 mm holes.
- 4. Fit the 4 mm screws temporarily and the filing should be done according to marking.
- 5. File the workpieces according to size, mind the right angles and remove the burr as required.
- 6. Take the plates apart, drill and countersink the 5.3 mm holes.
- 7. Fit the countersunk screws with washers and hexagon nuts.
- 8. Cover and isulate the screw heads by fitting the thin plate from underneath with the help of 4 mm cheese head screws.

TERMINAL PLATE 1

EP 2.3/2.5.3/1

Bench Work

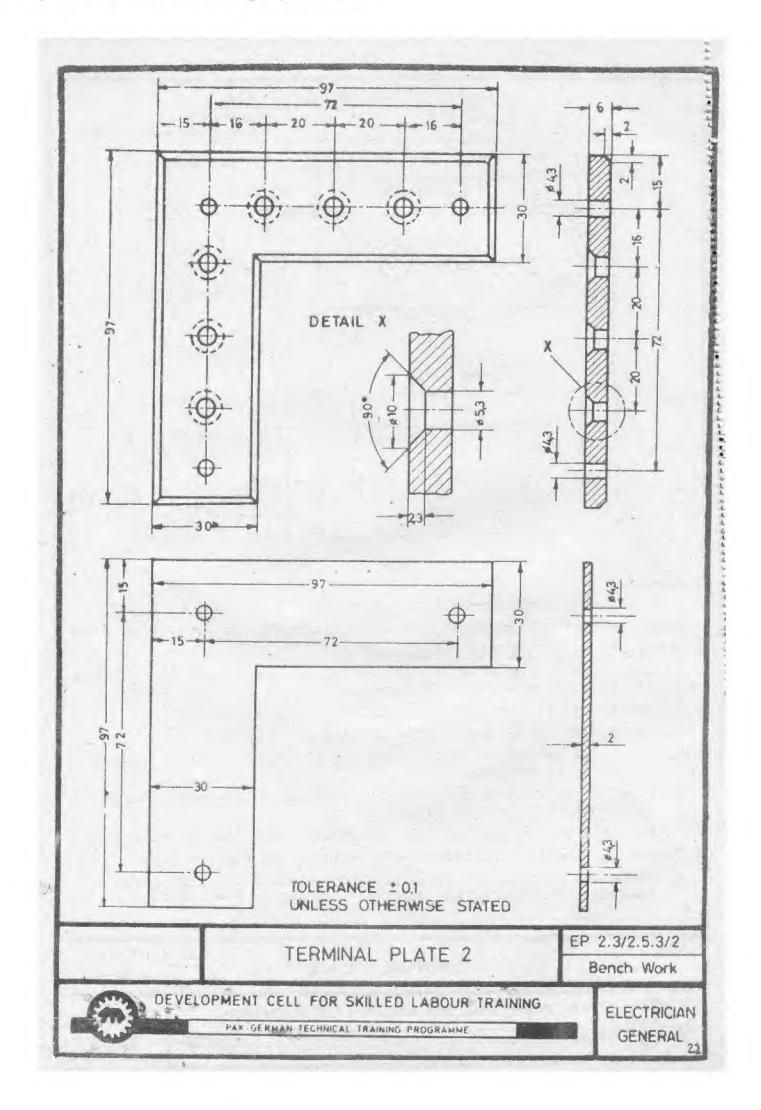


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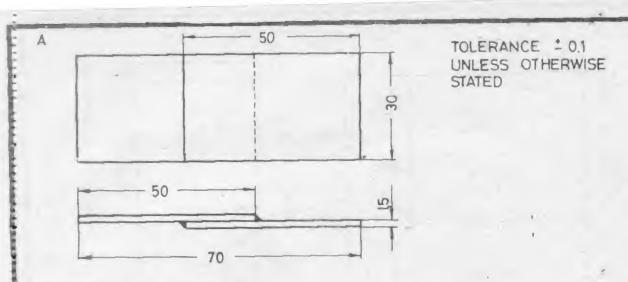
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GENERAL 21

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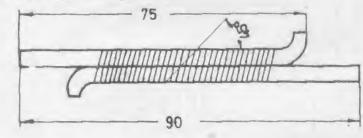


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SEQUENCE OF . OPERATION

- 1. File sheets at right angle according to the given measur-
- 2. Make the soldering surfaces clean and bright using file or scraper.
- 3. Apply soldering flux.
- 4. Tin both sheets at the soldering surfaces.
- 5. Solder the joint.



SEQUENCE OF OPERATION

- 1. Straighten and bend the copper wire and make it bright.
- 2. Wrap bendung wire around the joint according to sketch.
- Apply soldering flux.
 Add solder and make sure that it properly penetrates the joint.
- 5. Saw under 45° as shown in the sketch and file the cutting surfaces. for checking.

TOOLS AND MATERIALS

File, Scraper, Combi-pliers, Soldering iron, Soldering flux, Solder, Soldering stone.

MOTE

It is essential to heat sheets and wires to the correct soldering temperature. At too low temperature to solder does not melt and penetrate the joint properly. Such "cold joints" are not strong and do not give a good conductive connection.

SOLDERING

A. SOLDERING JOINT

B. WIRE JOINT

EP 2.3/2.5.3/3

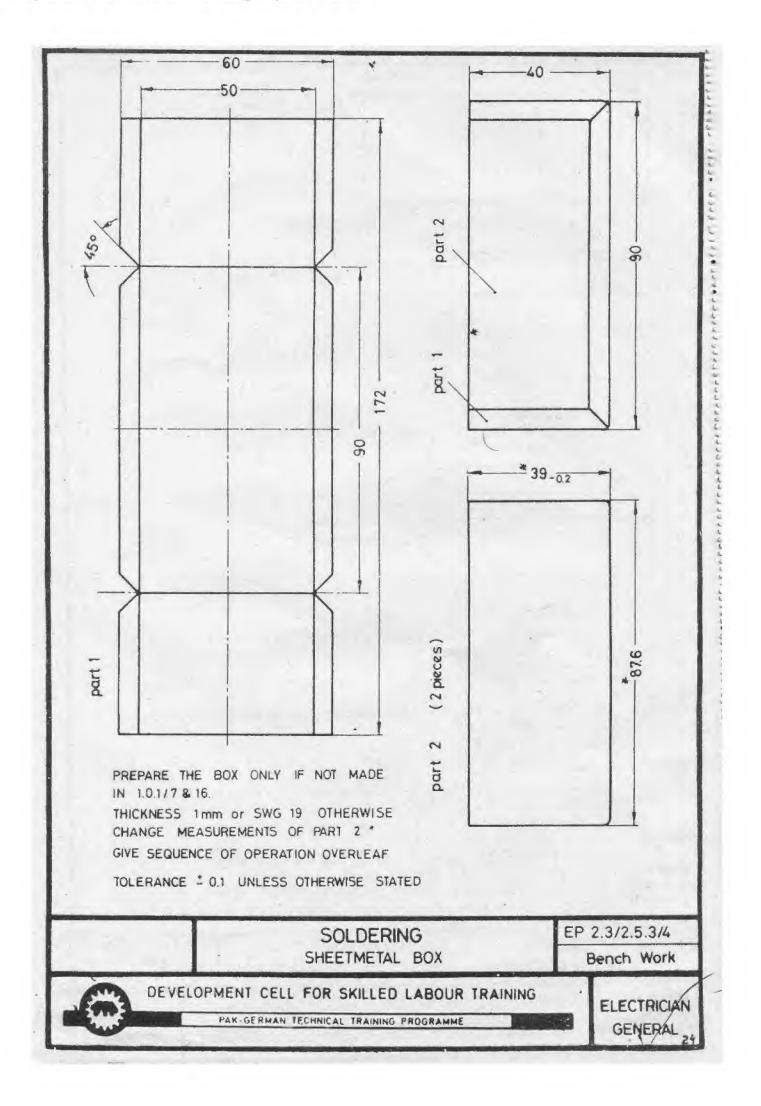
Bench Work



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL



1. Remove the insulation from the ends of wire.

2. Make the ends clean and bright.

3. Twist the wires together as shown in drawing.

4. Add soldering flux.

5. Solder the wire-connection.

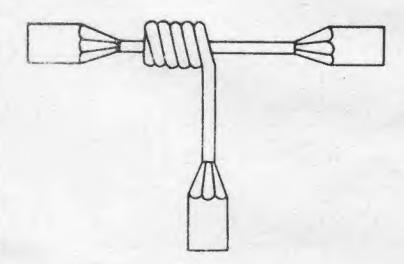
TOOLS AND MATERIALS

Combination-pliers, flat-nose-pliers, electricians knife, insulation remover, soldering iron, solder flux, soldering wire.

NOTE

Heat up the soldering joints until solder flows. Don't stick solder to the joint.

B



SEQUENCE OF OPERATION

1. Remove the insulation from the ends of wire.

2. Make the ends clean and bright.

3. Twist the wires together as shown in drawing.

4. Ada soldering flux.

5. Solder the wire-connection.

SOLDERING

A MARRIED - JOINT

B T - JOINT

EP 2.3/2.5.3/5

Bench Work

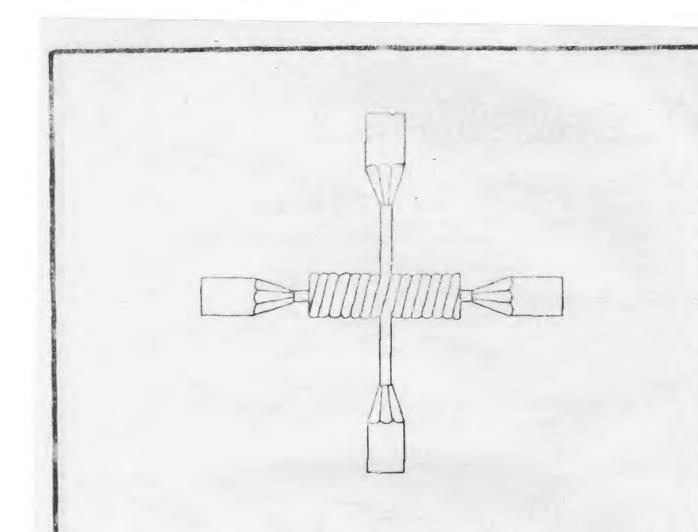
DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL Y

7 L-1 VL





- 1. Remove the insulation from the ends of wire.
- 2. Make the ends clean and bright.
- 3. Twist the wires together as shown in drawing.
- 4. Add soldering flux.
- 5. Solder the wire-commetion.

TOOLS AND HATERIALS

Combination-pliers, flat-nose-pliers, electricians knife, insulation remover, soldering iron, solder flux, soldering wire.

SOLDERING CROSS JOINT

EP 2.3/2.5.3/6

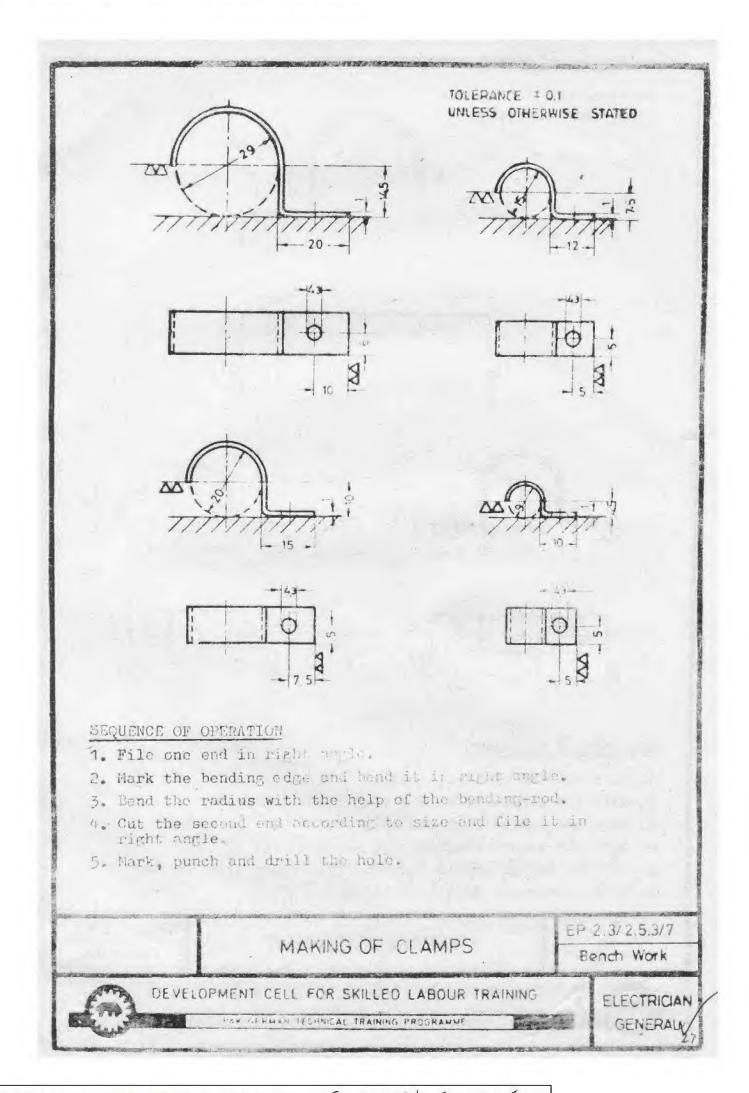
Bench Work

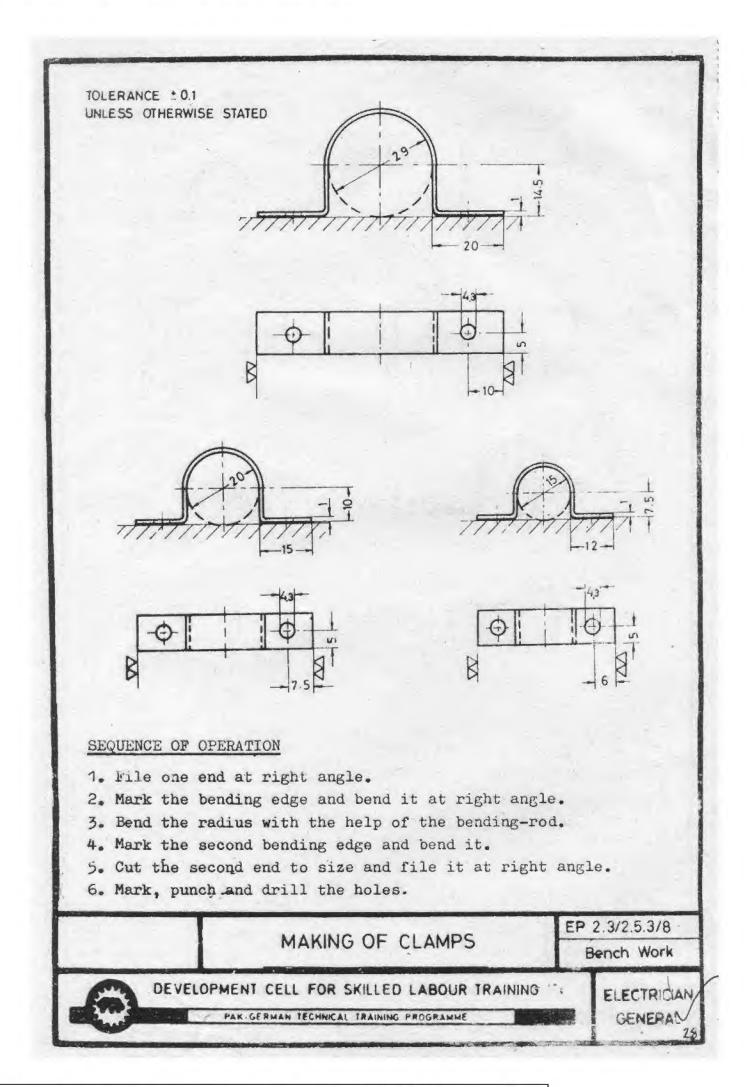
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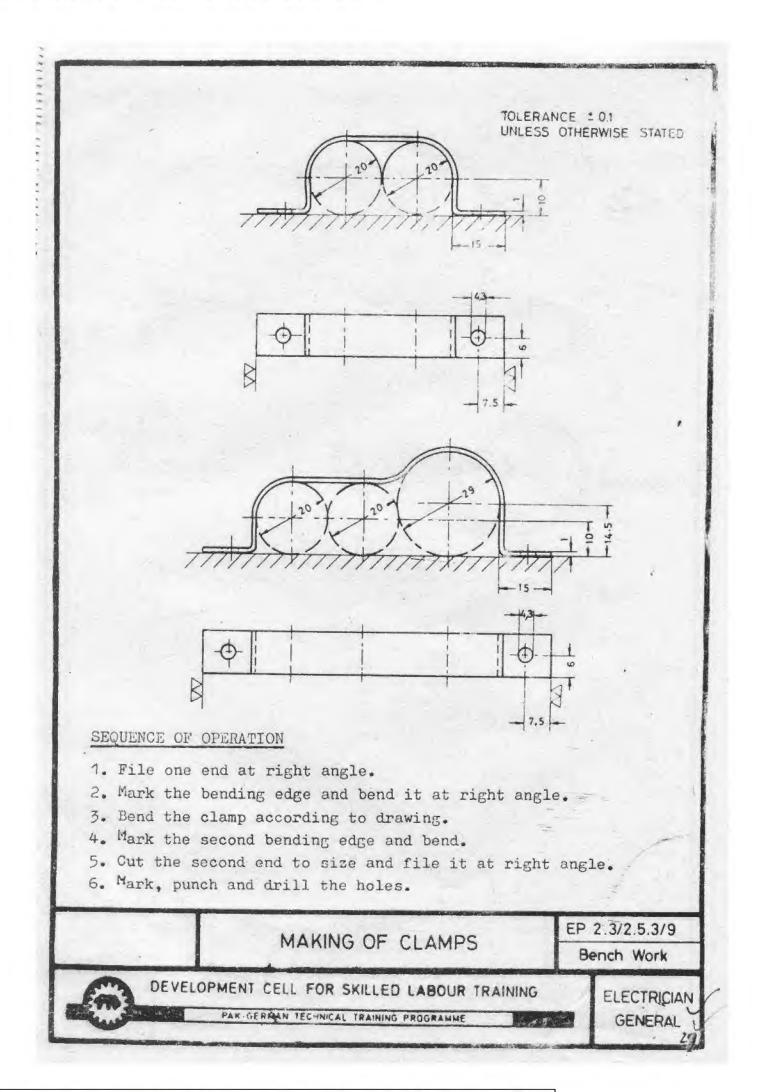
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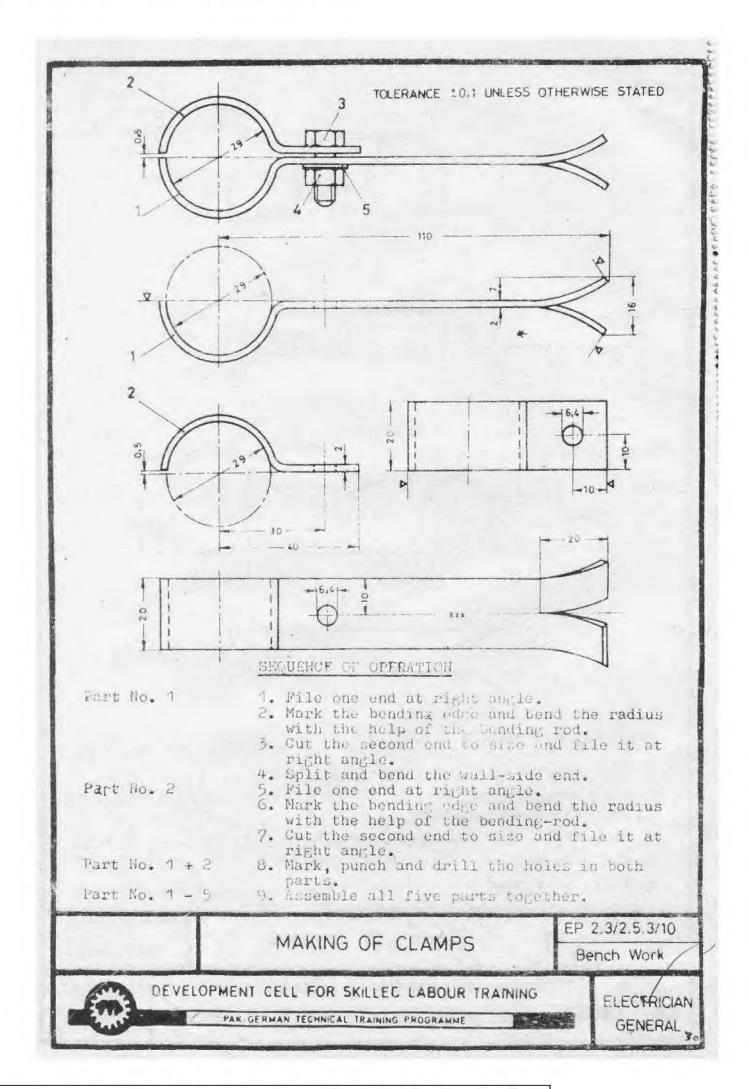
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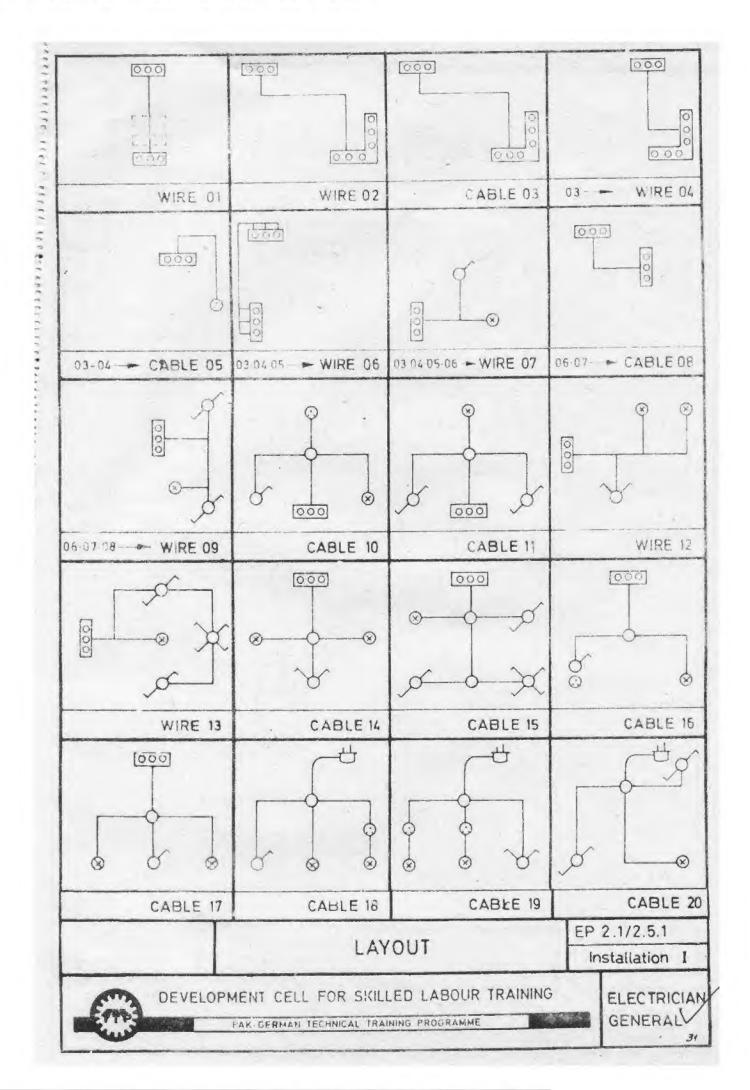
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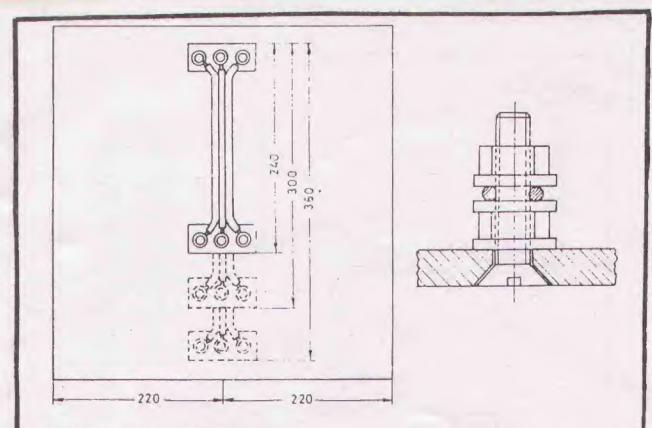








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- Fix terminal plates on the exercise board according to drawing.
- 2. Straighten the wire and cut it into three equal pieces.
- 3. Remove the insulation from one end of each wire.

4. Make an eye on each bared end.

- 5. Bend the wires according to drawing.
- 6. Cut the other ends of the wires to the necessary length, remove the insulation and make eyes.
- 7. Connect the wires with terminals and tighten the nuts.
- 8. Check the job thoroughly and compare with drawing.

TOOLS REQUIRED

Electrician's knife
Plier, Flat- and Round Nose Plie.
Backsquare, Mcterrule,
Spanner 9 mm

MATERIAL

- 2 Terminal plates I,
 compl.
- 1.20 m NYA 1.5 mm² (1/.044~1 mm²)
- 4 Cheese head screws
 M 4 x 25
 (3/16 " x 1 ") w. nuts
 and washers

NOTE

Don't damage the conductor when removing the insulation! Don't bend the wire with sharp edged tools! Make eyes always according to screw-size and bend them clockwise!

HANDLING OF WIRE

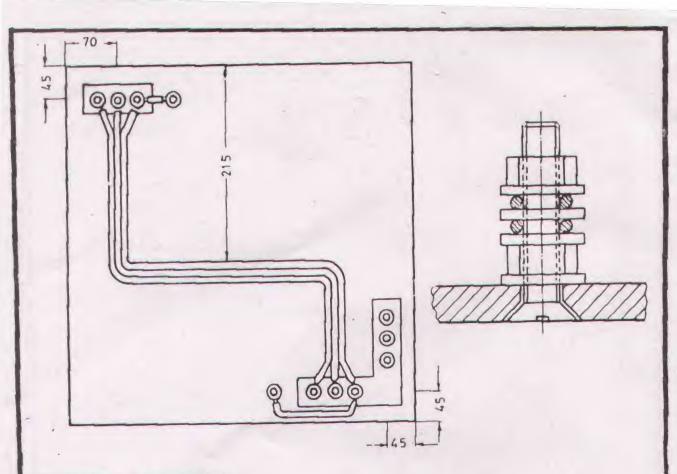
EP 2.3/2.5.1/1

Installation 1

DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAR GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL



- 1. Remove all parts from exercise board.
- 2. Fix terminal plates on the exercise board according to drawing.
- 3. Straighten the wire and cut it into three equal pieces.
- 4. Remove the insulation, make eyes and connect the wires with terminals on one side.
- . Bend the wires according to drawing.
- 6. Cut the other ends of wires to the necessary length, remove the insulation and make eyes.
- 7. Connect the wires with terminals, tighten the nuts and do the final check.

NOTE

Don't damage the conductor while removing the insulation! Don't bend the wire with sharp edged tools! Make eyes always according to screw-size and bend them clockwise!

MATERIAL

1 Terminal plate I, compl. 7 Cheese head screws M 4 x 25 1 Terminal plate II, compl. (5/16 " x 1 ") w. nuts & washers 2.50 m NYA 1.5 mm (1/.044~1 mm²)

HANDLING OF WIRE

EP 2.3/2.5.1/2

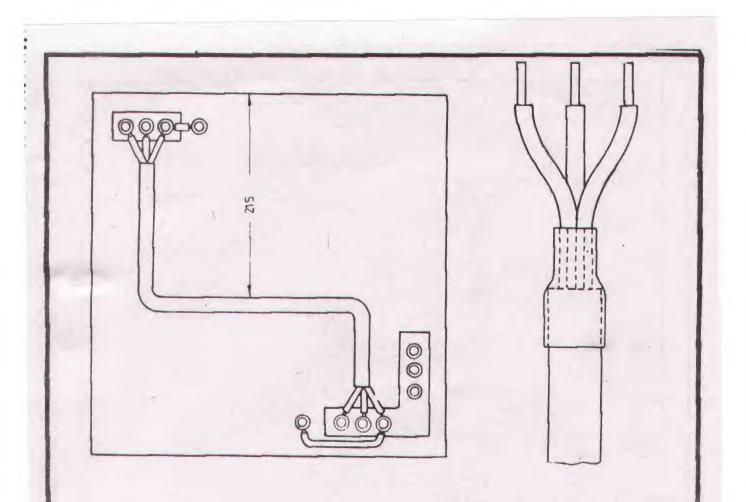
Installation I



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK GEHMAN FECHNICAL TRAINING PROGRAMME

GENERAL .



- 1. Remove the wires of exercise 2.
- 2. Straighten the cable.
- 3. Bend the cable according to drawing.
- 4. Prepare both ends of the cable exactly as per special sketch and make eyes
- 5. Fix the cable on the exercise board with clamps and connect the wires with terminals.
- 6. Check the job thoroughly and compare with drawing.

NOTE

Don't use tools to bend the cable.

Don't damage conductor-insulation while removing the sheath-insulation.

MATERIAL

0.80 m NYM 3 x 1.5 mm

(3 core cable round 1/ 044 - 3/.029)

HANDLING OF CABLE

EP 2.3/2.5.1/3

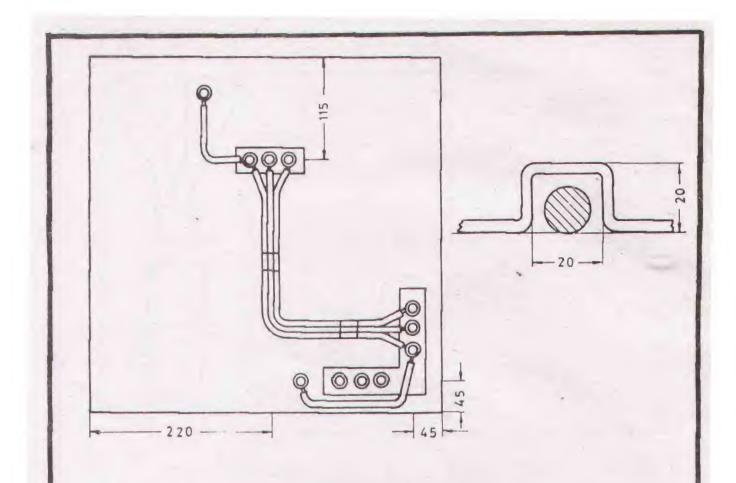
Installation 1



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAR GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL 55



- 1. Fix an additional terminal plate on the exercise board. 2. Straighten the wire and cut it into three equal pieces.
- 3. Bundle the wires with insulation tape.
- 4. Bend the wires according to drawing and make the crossing as shown in additional sketch.
- 5. Cut the ends of the wires to the necessary length, remove the insulation and make eyes.
- 6. Connect the wires with both terminal plates, tighten the nuts and do the final check.

MATERIAL

- 1 Terminal plate I
- 2.0 m NYA 1,5 mm² (1/.044 ~ 1 mm²)
- 2 Cheese head screws M4 x 25 (3/16" x 1") with nuts and washers

HANDLING OF WIRE

EP 2.3/2.5.1/4

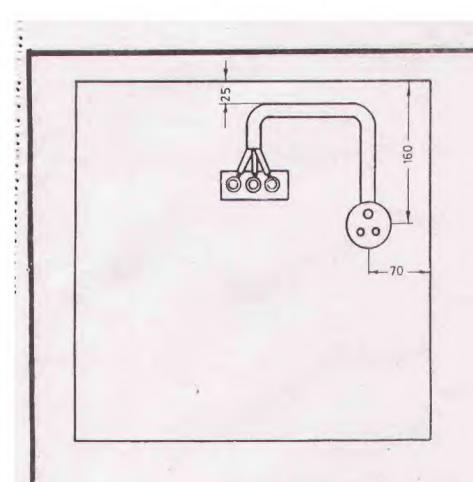
Installation I



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL



- 1. Fix the socket on the exercise board.
- 2. Straighten the cable.
- 3. Bend the cable according to drawing. 4. Prepare the ends of the cable.
- 5. Fix the cable with clamps on the exercise board.
- 6. Connect the wires with terminals.
- 7. Check the job thoroughly and compare it with drawing.

NOTE

Connect all wires properly, especially the protective wire.

MATERIAL

- 1 3-pin socket 1 round block 0.50 m NYM 3 x 1.5 mm 2 (3 core cable round 1/.044 - 3/.029)
- 1 Countersunk screw M 4 x 50 (3/16 " x 2 ") w. nut & washer)
- 2 Wood screws 3.5 x 20 half round head (No. 6 3/4")

INSTALLING A SOCKET

EP 2.3/2.5.1/5

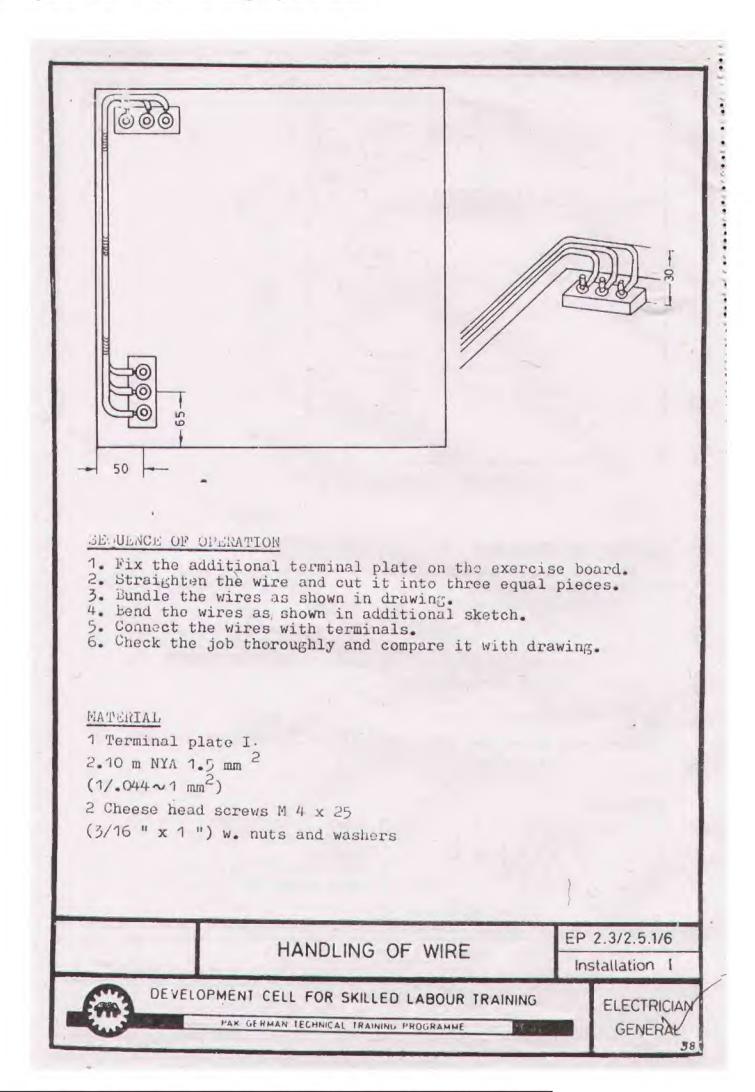
Installation I

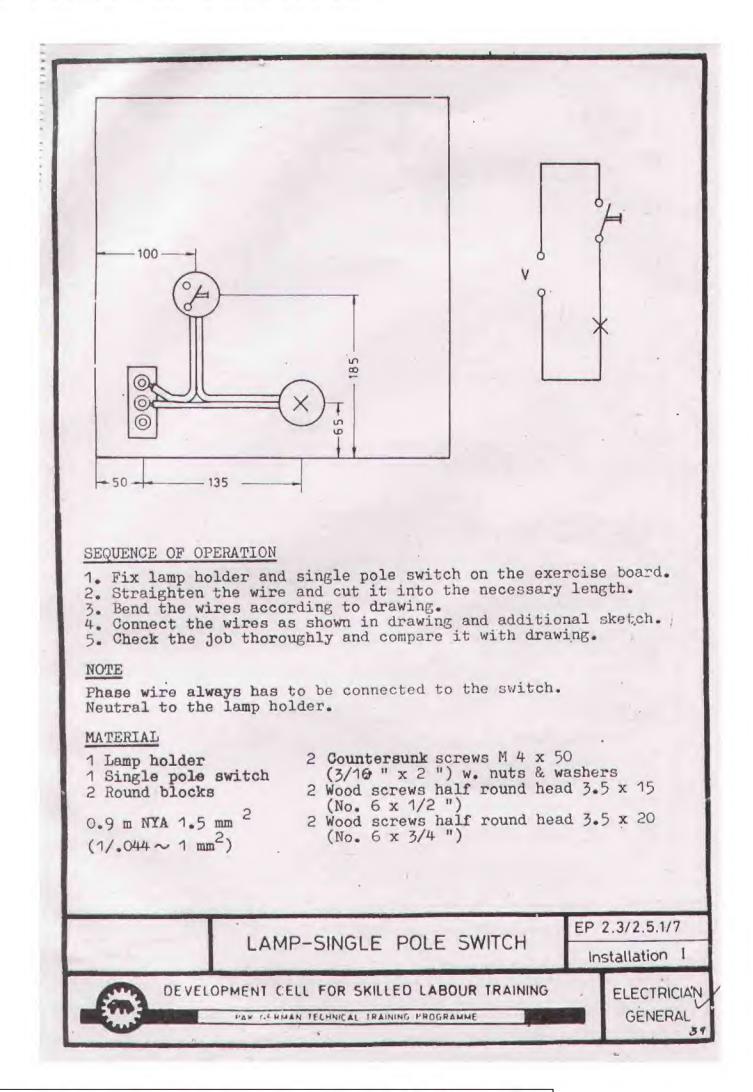


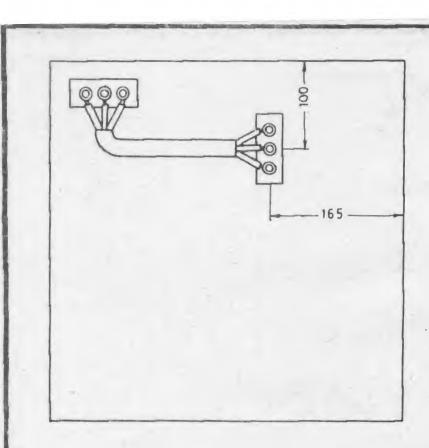
DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIAN GENERAL







1. Remove the parts from exercises 3, 4 and 5.

2. Fix terminal plate on the exercise board according to drawing.

3. Straighten the cable.

4. Bend the cable according to drawing and prepare the ends.

5. Fix the cable with clamps on the exercise board.

6. Connect the wires with terminals.
7. Check the job thoroughly and compare it with drawing.

MATERIAL

1 Terminal plate I

0.35 m NYM 3 x 1.5 mm²

(3 core cable round 1/.044 - 3/.029)

2 Cheese head screws M 4 x 25

(3/16" x 1") w. nuts & washers

HANDLING OF CABLE

EF 2.3/2.5.1/8

Installation 1

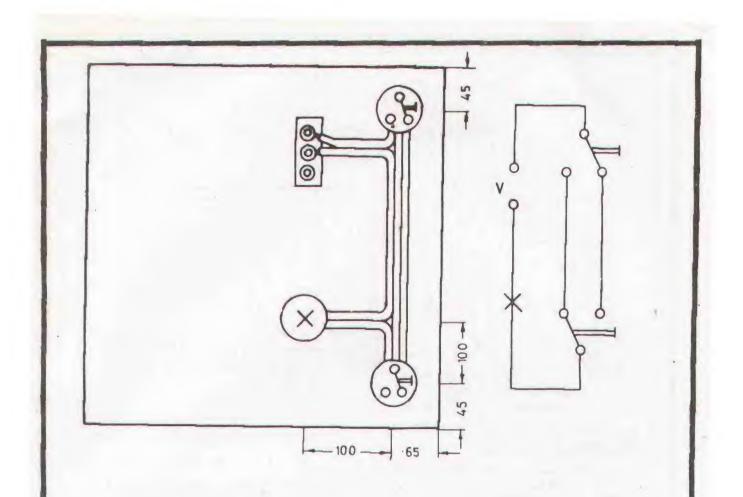


DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIAN GENERAL

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- 1. Fix lamp holder and two-way switches on the exercise board.
- 2. Straighten the wire and cut it into the necessary length.
 3. Bend the wires according to drawing.
 4. Connect the wires as shown in drawing and additional sketch.
 5. Check the job thoroughly and do the final check.
 6. Test the wiring.

MATERIAL

- 1 Lamp holder
- 2 Two-way switches 3 Round blocks
- 2.0 m NYA 1.5 mm² $(1/.044 \sim 1 \text{ mm}^2)$
- 3 Countersunk screws M 4 x 50 (3/16 " x 2 ") w. nuts & washers 2 Wood screws half round head 3.5 x 15 (No. 6 x 1/2 ") 4 Wood screws half round head 3.5 x 20 (No. 6 x 3/4 ")

TWO WAY CIRCUIT

EP 2.3/2.5.1/9

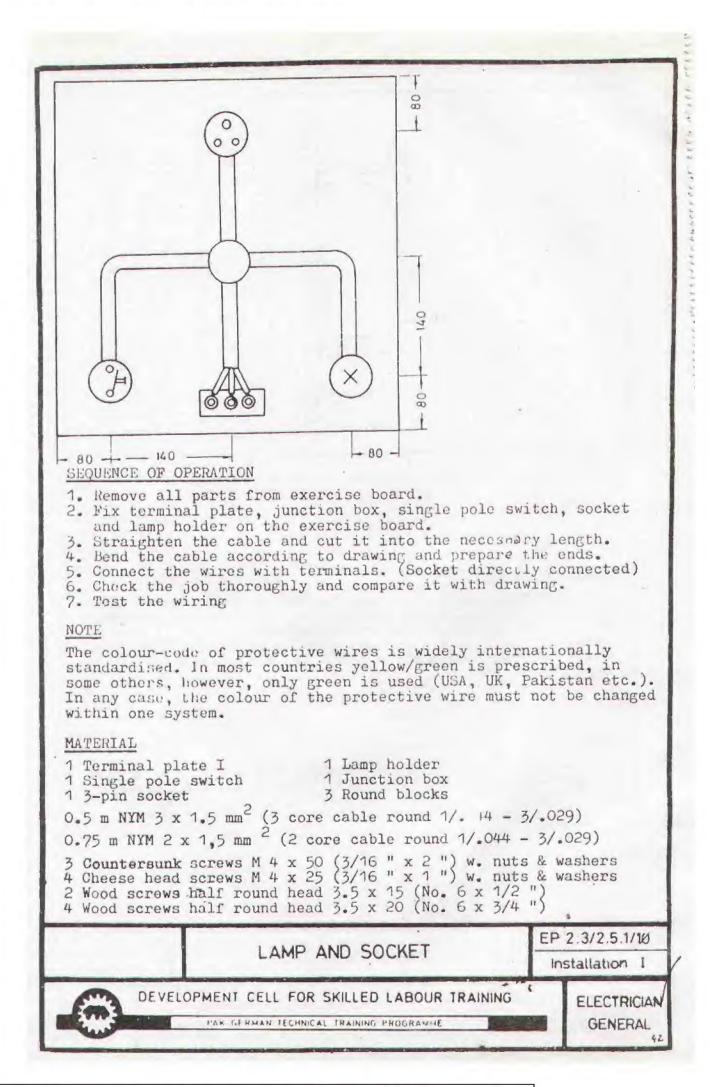
Installation I

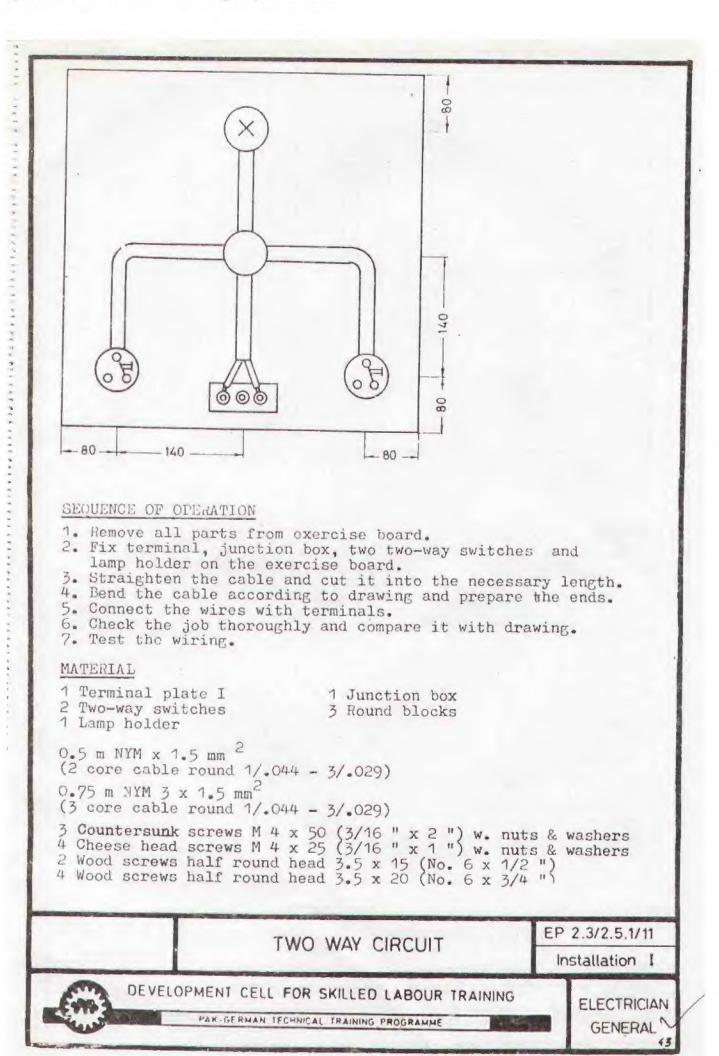


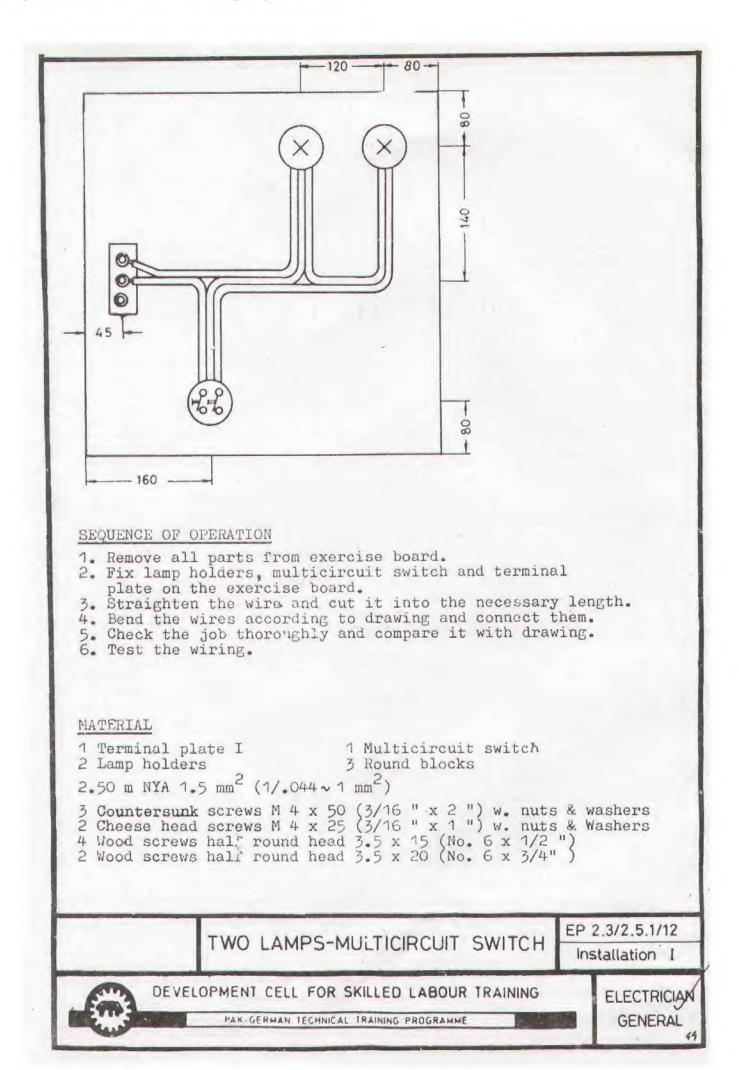
DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

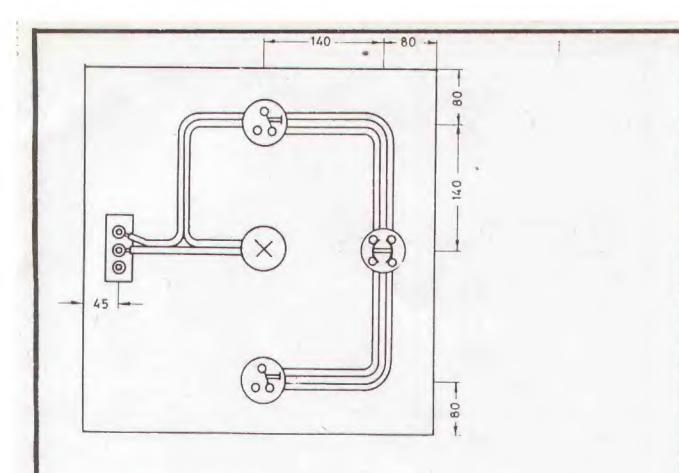
PAK GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIAN









- 1. Remove all parts from exercise board.
- 2. Fix lamp holder, two-way switches, terminal plate and intermediate switch on the exercise board.
- 3. Straighten the wire and cut it into the necessary length.
- 4. Bend the wires according to drawing and connect them.
- 5. Check the job thoroughly and compare it with drawing.
- 6. Test the wiring.

MATERIAL

- 1 Terminal plate I
- 1 Intermediate switch

1 Lamp holder

- 4 Round blocks
- 2 Two-way switches
- 3.5 m NYA 1.5 mm 2 (1/.044~1 mm²)
- 4 Countersunk screws M 4 x 50 (3/16 " x 2 ") w. nuts & washers 2 Cheese head screws M 4 x 25 (3/16 " x 1 ") w. nuts & washers 2 Wood screws half round head 3.5 x 15 (No. 6 x 1/2 ") 6 Wood screws half round head 3.5 x 20 (No. 6 x 3/4 ")

If intermediate switch is not available then perform practical exercise of Drg. EP 2.3/2.5.1/21

LAMP-TWO WAY AND INTERMEDIATE SWITCH

EP 2.3/2.5.1/13

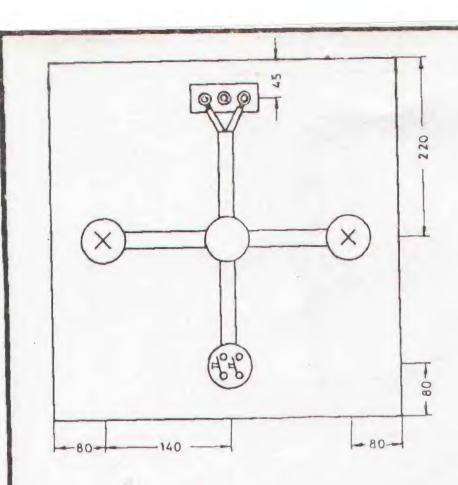
Installation I



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIAN GENERAL



- 1. Remove all parts from exercise board.
- 2. Fix junction box, multicircuit switch, lamp holder and terminal plate on the exercise board.
- 3. Straighten the cable and cut it into the necessary length.
- 4. Prepare the ends and connect the wires.
- 5. Check the job thoroughly and connect the wires.
- 6. Test the wiring.

MATERIAL

- 1 Terminal plate I
- 1 Junction box

- 2 Lamp holders
- 3 Round blocks
- 1 Multicircuit switch
- 0.9 m NYM 2 x 1.5 mm² (2 core cable round 1/.044 3/.029)
- 0.3 m NYM 3 x 1.5 mm² (3 core cable round 1/.044 3/.029)
- 3 Countersunk screws M 4 x 50 (3/16 " x 2 ") w. nuts & washers 4 Cheese head screws M 4 x 25 (3/16 " x 1 ") w. nuts & washers 4 Wood screws half round head 3.5 x 15 (No. 6 x 1/2 ") 2 Wood screws half round head 3.5 x 20 (No. 6 x 3/4 ")

TWO LAMPS-MULTICIRCUIT SWITCH

EP 2.3/2.5.1/14

Installation I

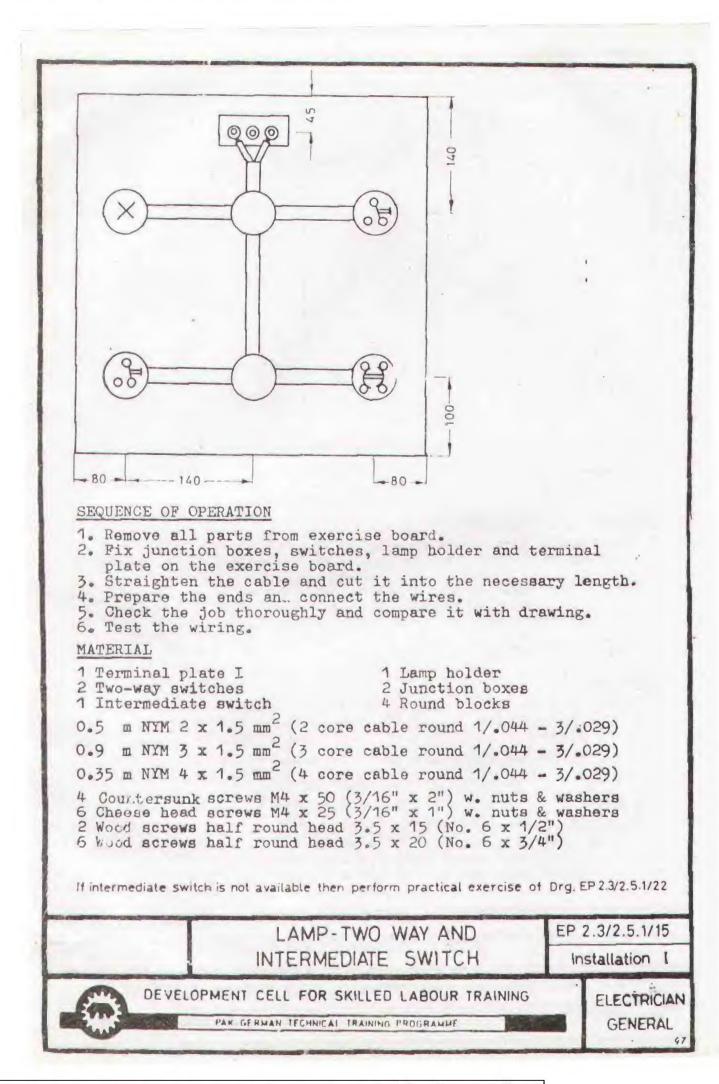


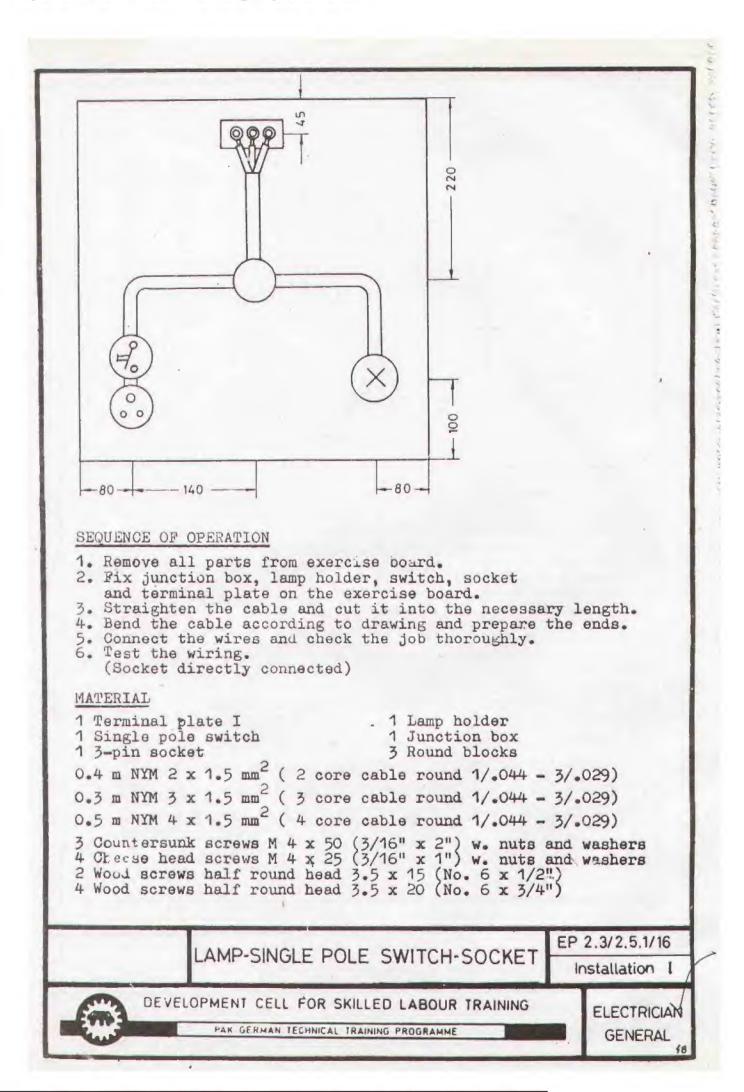
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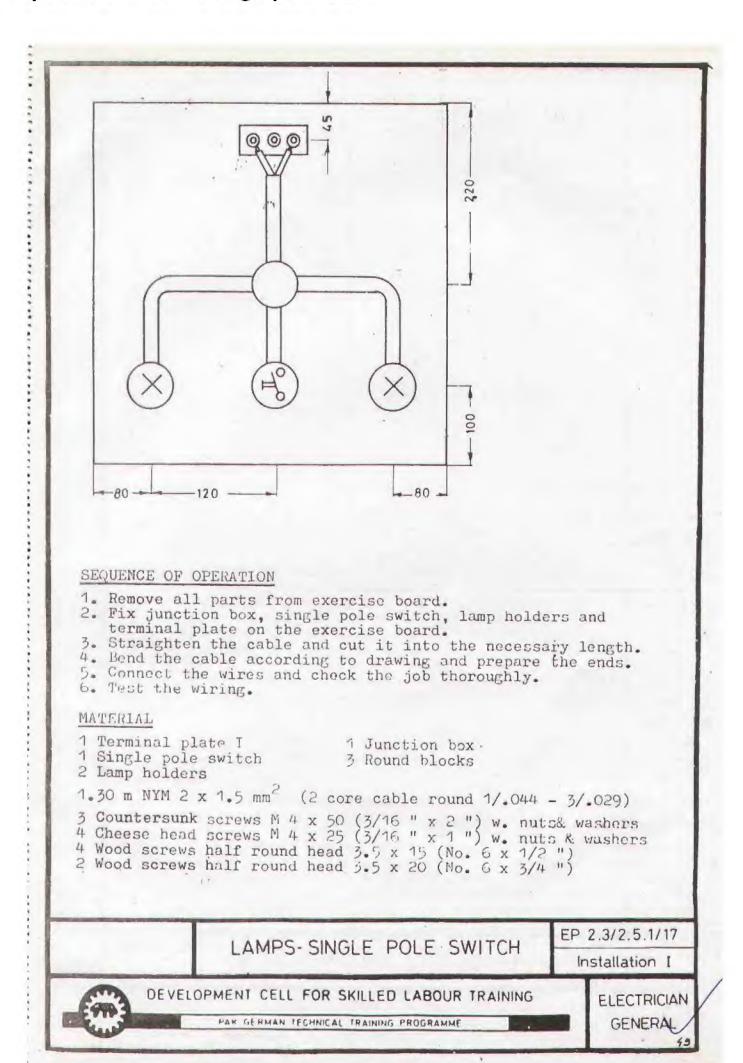
PAK-GERMAN TECHNICAL TRAINING PROGRAMME

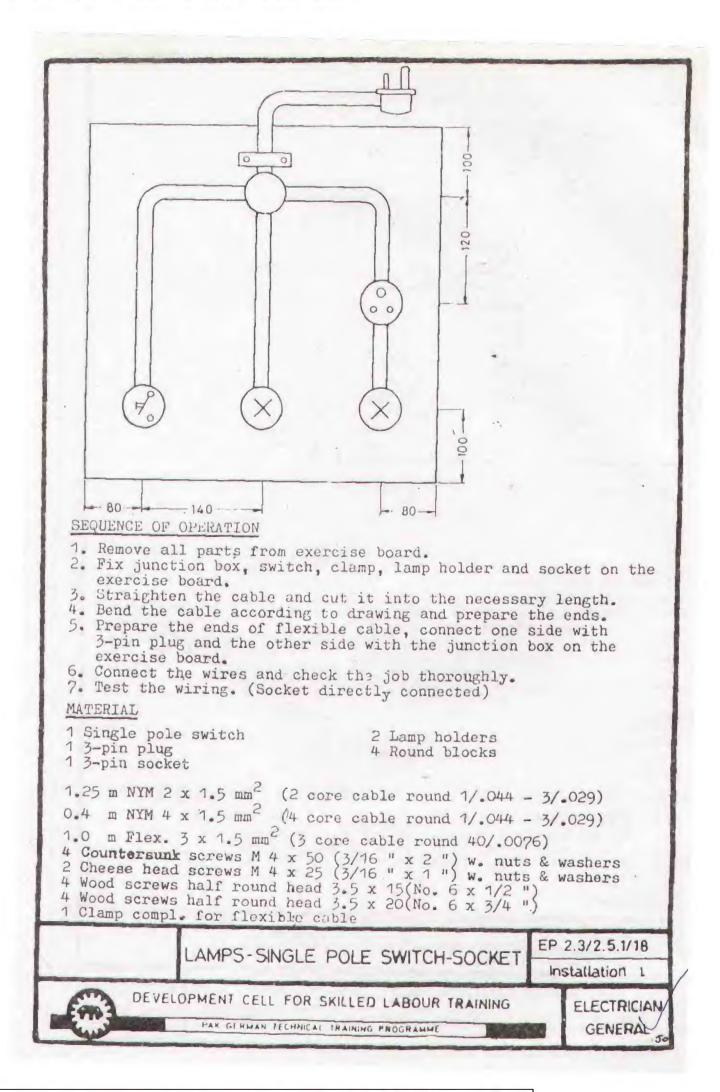
ELECTRICIAN GENERAL

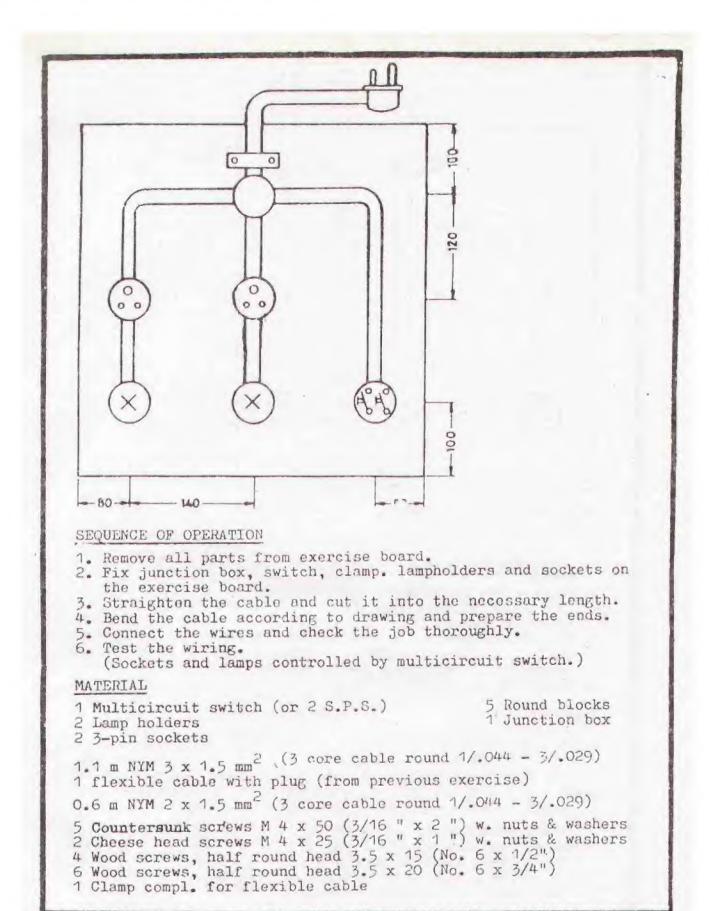
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LAMPS-MULTICIRCUIT SWITCH-SOCKET

EP 2.3/2.5.1/19

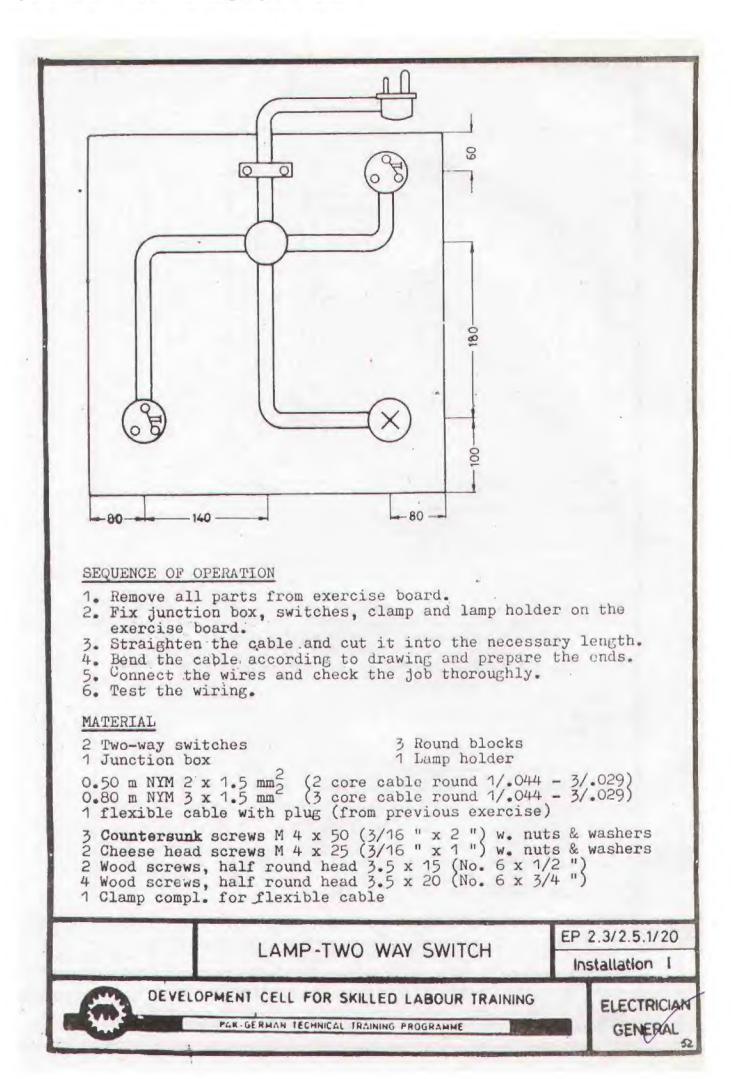
Installation I

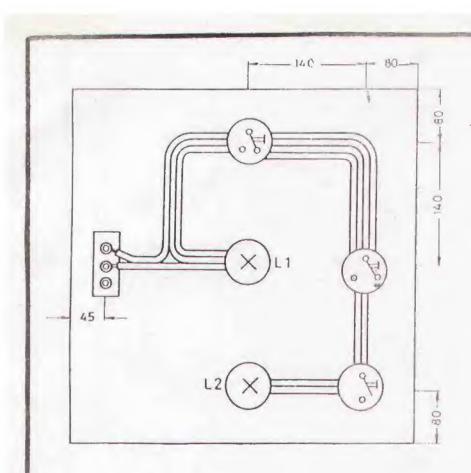


DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAR-GERMAN TECHNICAL TRAINING PROGRAMME

GENERAL





- 1. Remove all parts from exercise board.
- 2. Fix lamp holders, terminal plate, two-way switches and single pole switch on the exercise board.
- 3. Straighten the wire and cut it into the necessary length.
- 4. Bend the wires according to drawing and connect them. 5. Check the job thoroughly and compare it with drawing.
- 6. Test the wiring.

Lamp L_1 controlled by two-way switches. Lamp L_2 controlled by SPS.

MATERIAL

- 1 Terminal plate I
- 1 Single pole switch

2 Lamp holders

- 5 Round blocks
- 2 Two-way switches
- 5.40 m NYA 1.5 mm² (1/.044 \sim 1 mm²)
 5 Countersunk screws M 4 x 50 (3/16 " x 2 ") w. nuts & washers 2 Cheese head screws M 4 x 25 (3/16 " x 1 ") w. nuts & washers 4 Wood screws, half round head 3.5 x 15 (No.6x 1/2 ")
 6 Wood screws, half round head 3.5 x 20 (No. 6 x 3/4 ")

LAMPS-SINGLE POLE AND TWO WAY SWITCHES

EP 2.3/2.5.1/21

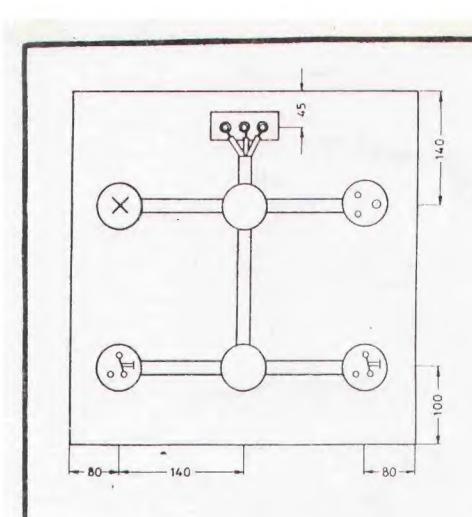
Installation I



DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIAN GENERAL



1. Remove all parts from exercise board.

2. Fix junction boxes, switches, lamp holder and terminal plate on the exercise board.

3. Straighten the cable and cut it into the necessary length.

4. Prepare the ends and connect the wires.

5. Check the job thoroughly and compare with drawing.

6. Test the wiring. (Socket directly connected)

MATERIAL

1 Terminal plate I

1 Lamp holder 2 Junction boxes

2 Two-way switches 1 3-pin socket

4 Round blocks

0.7 m NYM 2 x 1.5 mm² (2 core cable round 1/.044 - 3/.029)

1.2 m NYM 3 x 1.5 mm2 (3 core cable round 1/.044 - 3/.029)

4 Countersunk screws M 4 x 50 (3/16 " x 2 ") w. nuts & washers 6 Cheese head screws M 4 x 25 (3/16 " x 1 ") w. nuts & washers 2 Wood screws, half round head 3.5 x 15 (No. 6 x 1/2 ") 6 Wood screws, half round head 3.5 x 20 (No. 6 x 3/4 ")

LAMP-TWO WAY SWITCHES-SOCKET

EP 2.3/2.5.1/22

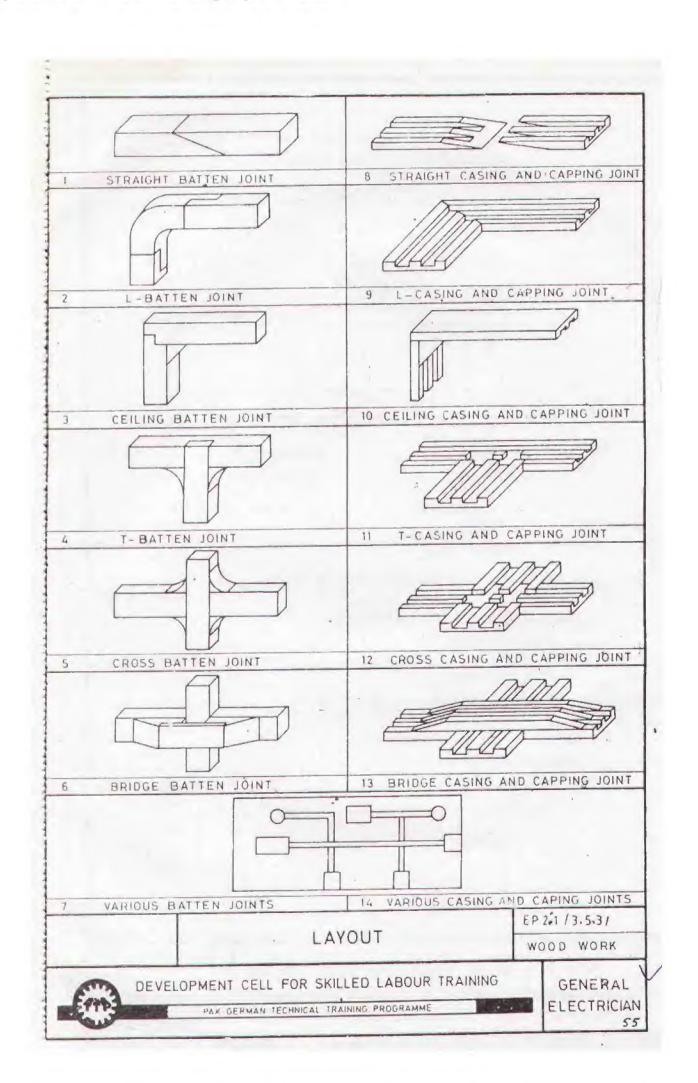
Installation 1

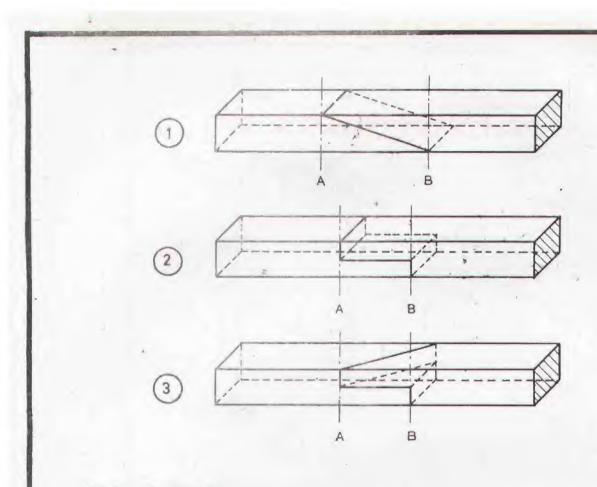


DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

PAK-GERMAN TECHNICAL TRAINING PROGRAMME

ELECTRICIA GENERAL





- MARK BOTH PIECES EQUALLY AND THOROUGHLY. LENGTH BETWEEN 'A' AND 'B' ABOUT 2 INCHES.
- 2. SAW PROPERLY AT MARKED LINES.
- 3. FILE THE SAWED SURPACES SMOOTH TO MAKE THEM PIT EXACTLY
- 4. SCREW (NAIL) THE TWO PIECES TOGETHER.
- 5. CHECK ALL OVER AND GIVE PINISHING TO THE JOINT ACCORDING TO DRAWING.

AND 'B' ACCORDING TO WIDTH OF BATTEN. HORIZONTAL LINE IN THE MIDDLE OF BATTEN. STEP 2, 3, 4 AND 5 AS IN JOINT 1.

JOINT 3 SAME SEQUENCE OF OPERATIONS AS JOINT 2.

METER RULE, TRY BACK SQUARE, SAW, RASP AND SMOOTH FILES, HAMMER, BENCH HOOK, SCREW DRIVER.

BATTEN- WIDTH	A-B
1/2*	3/4"
3/4"	1"
11-2"	1 1/2"

INLINE OR STRAIGHT-BATTEN JOINTS

EP-2-3/3-5-3/1

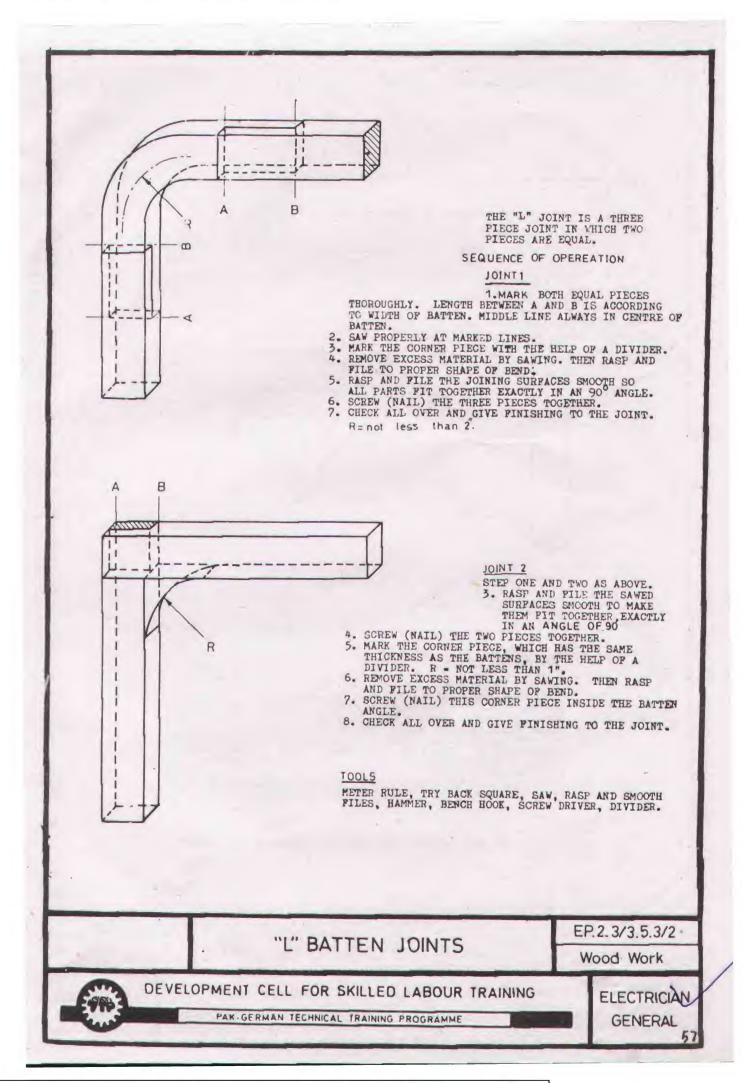
Wood Work

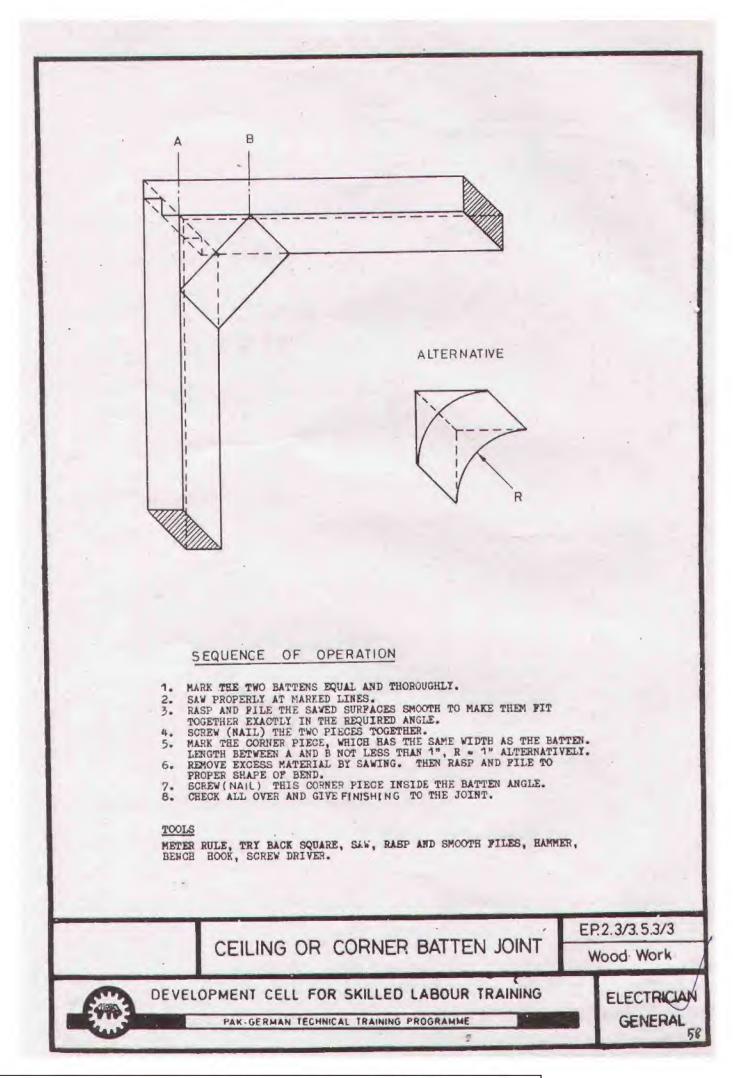


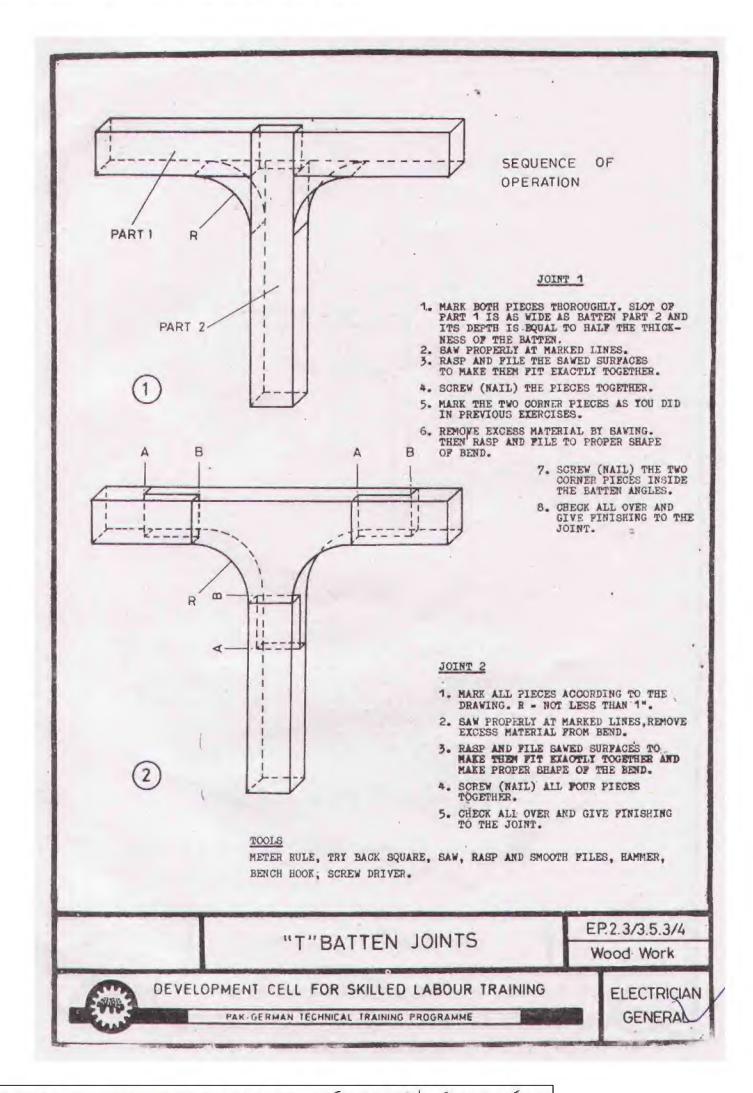
DEVELOPMENT CELL FOR SKILLED LABOUR TRAINING

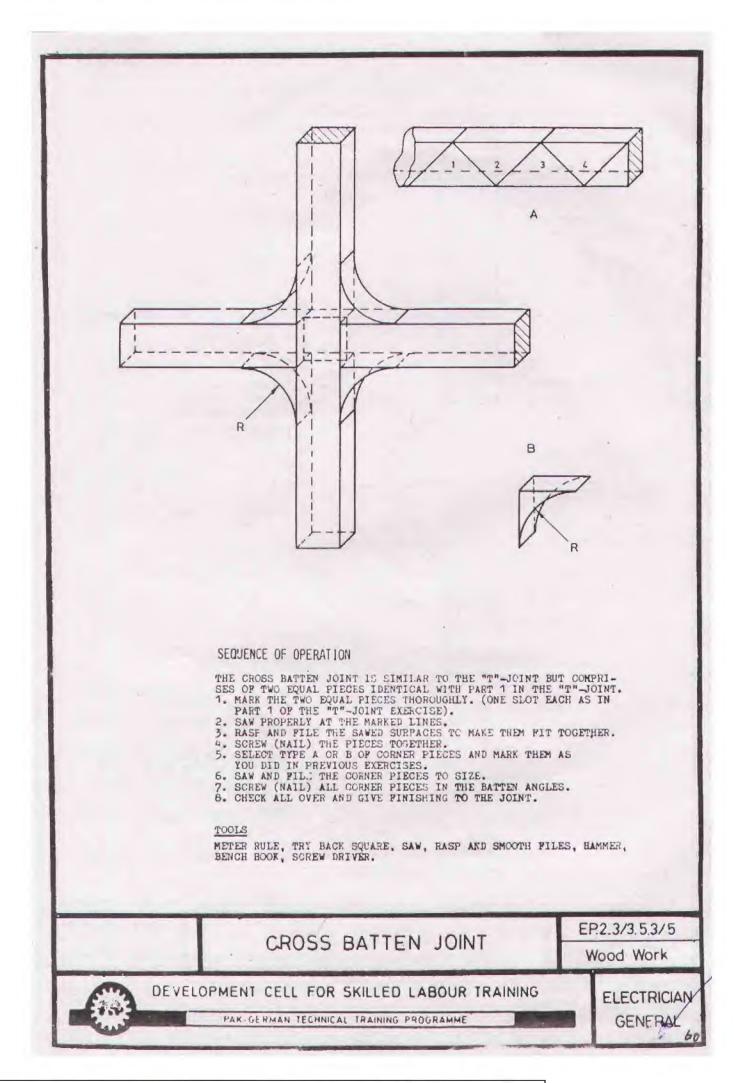
PAK-GERMAN TECHNICAL TRAINING PROGRAMME

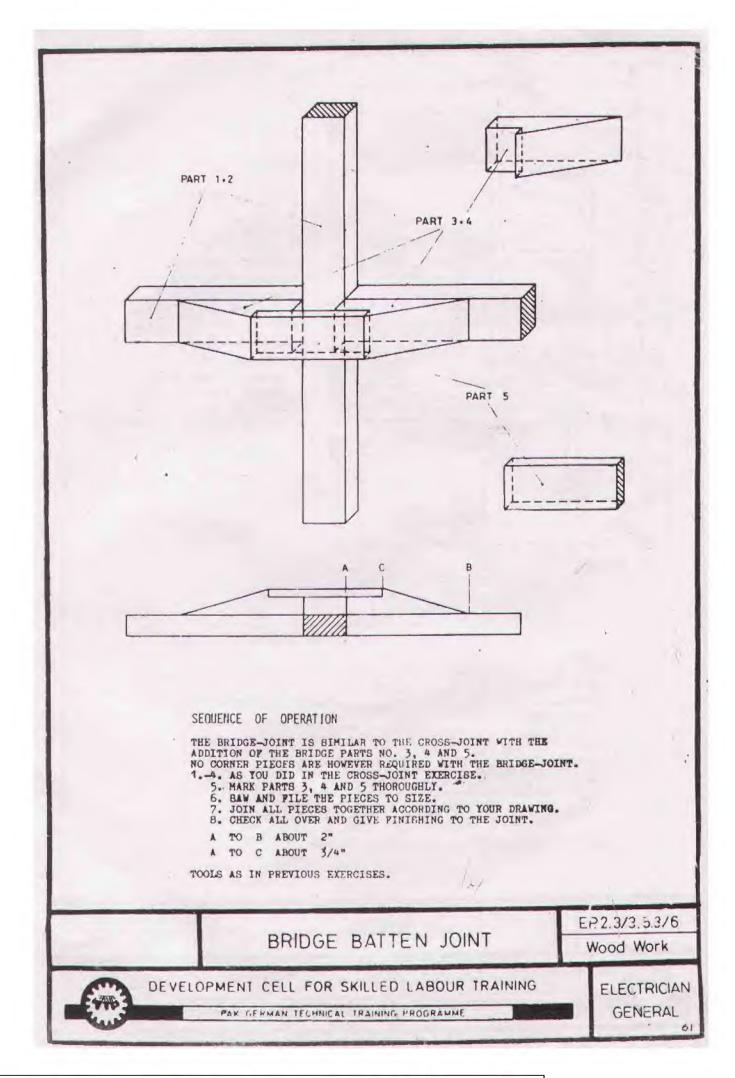
ELECTRICIAN GENERAL

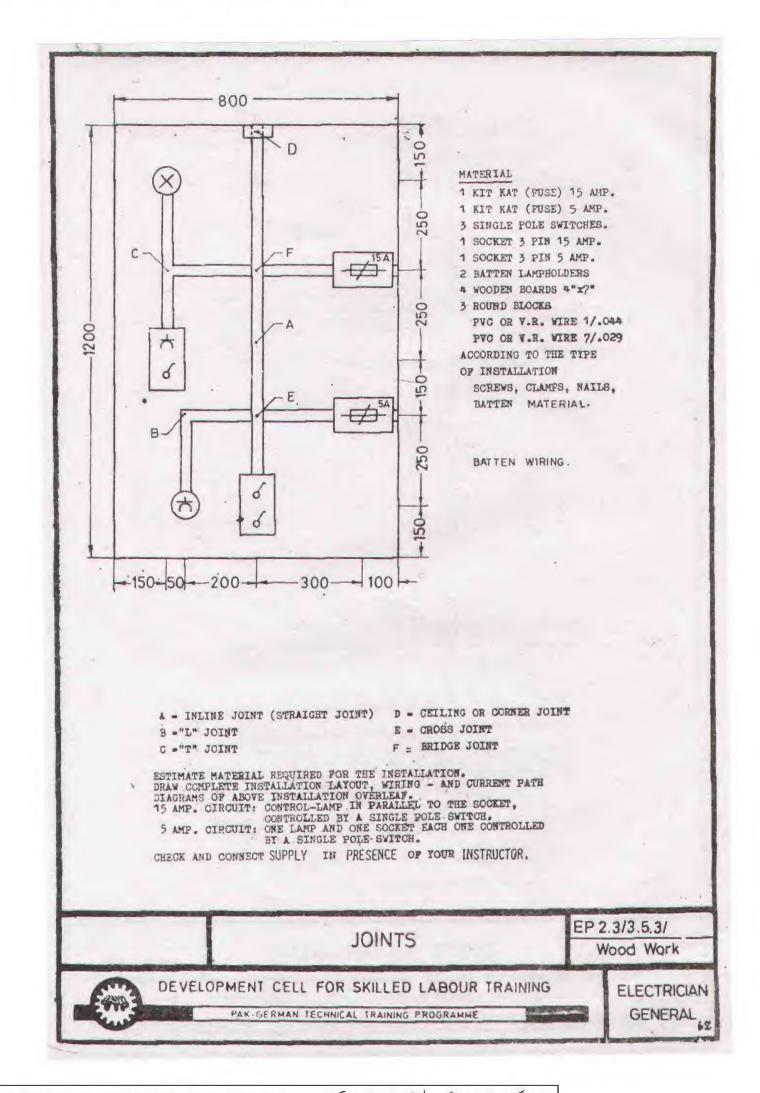


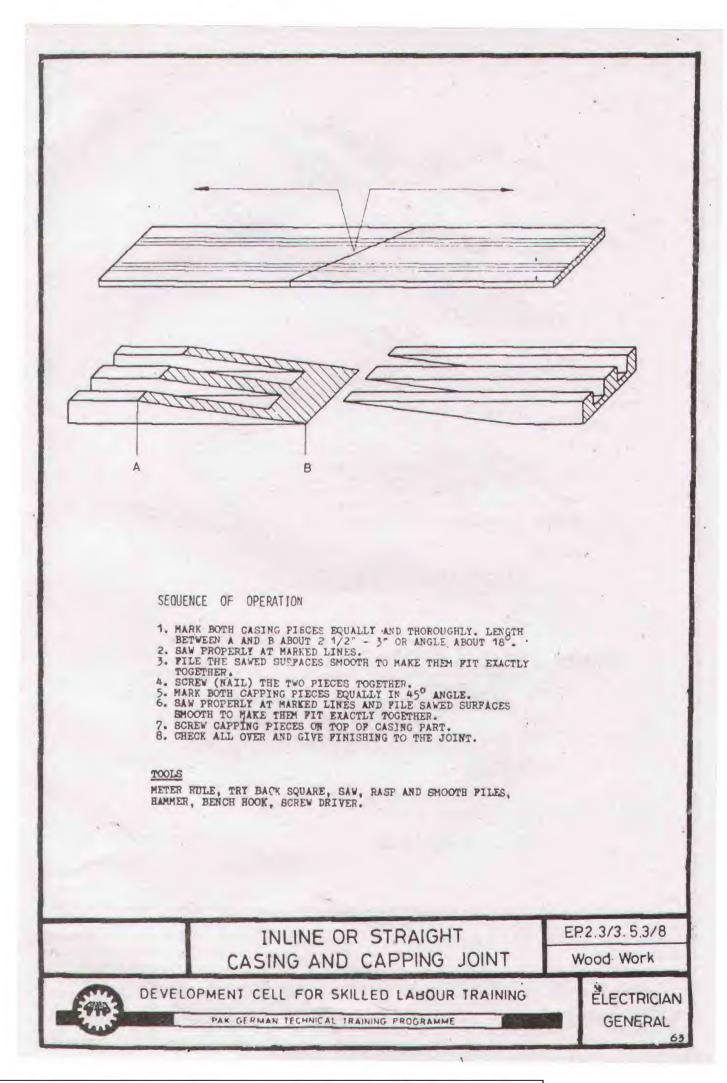


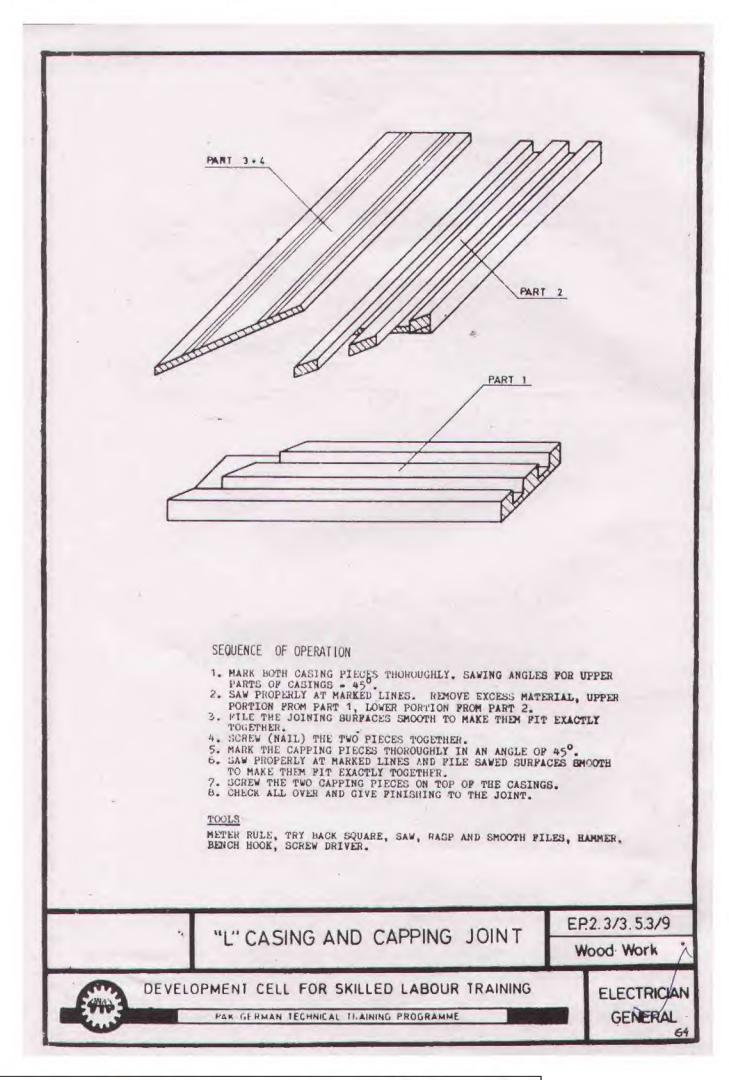


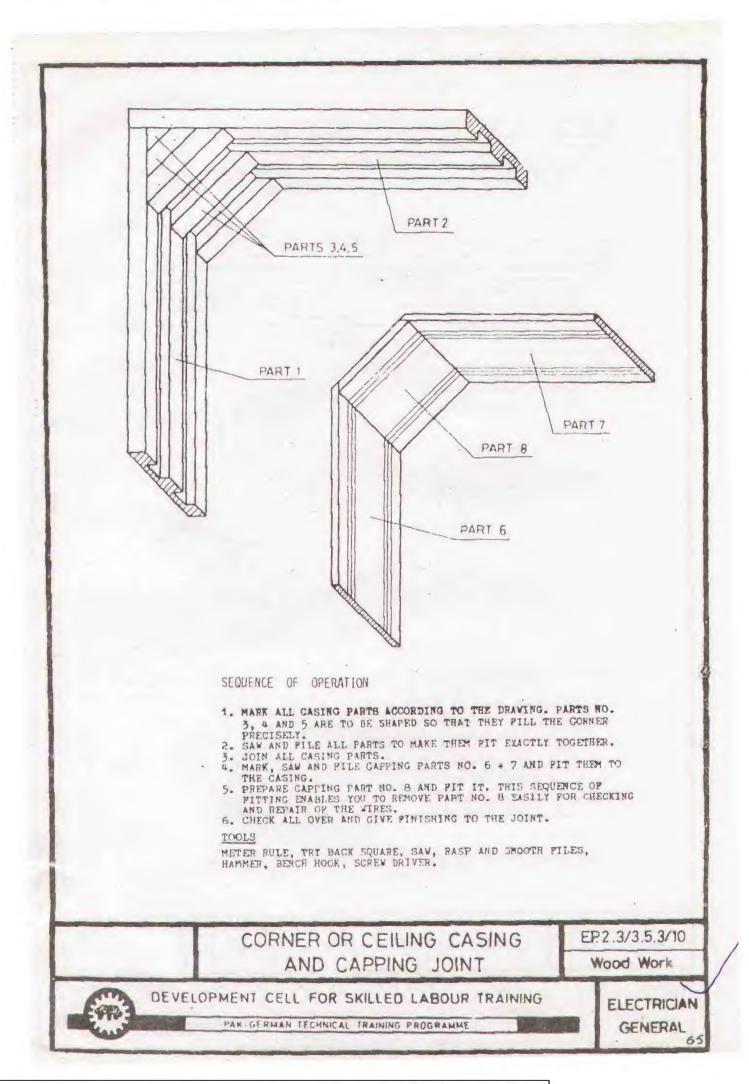


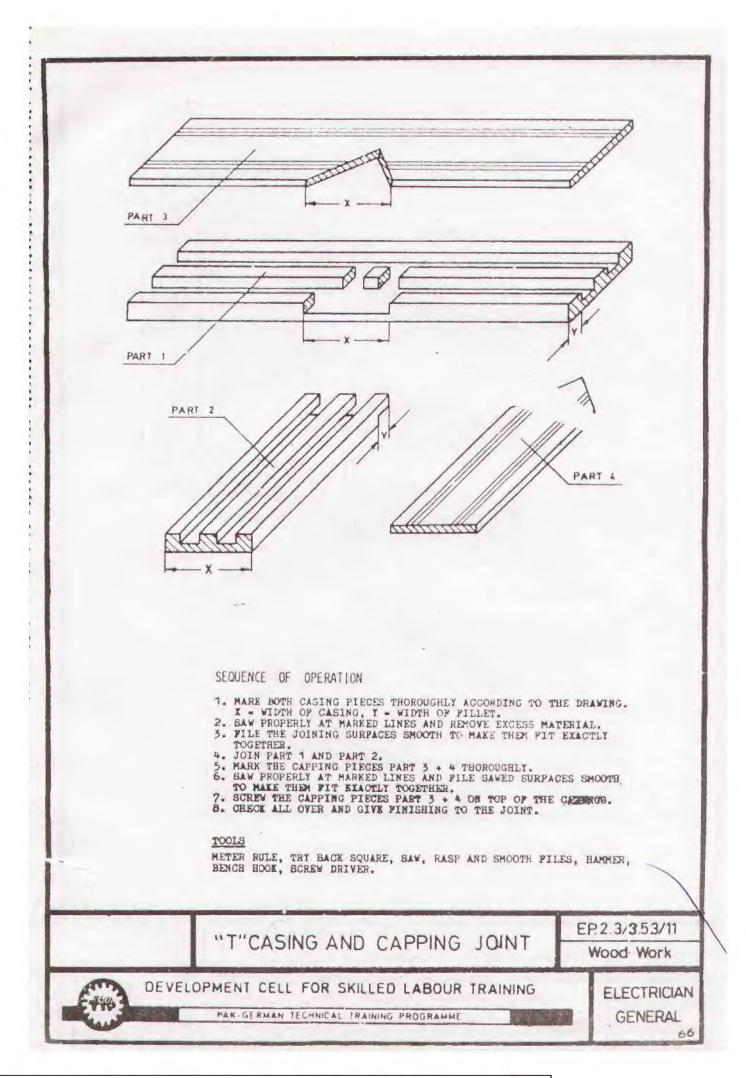


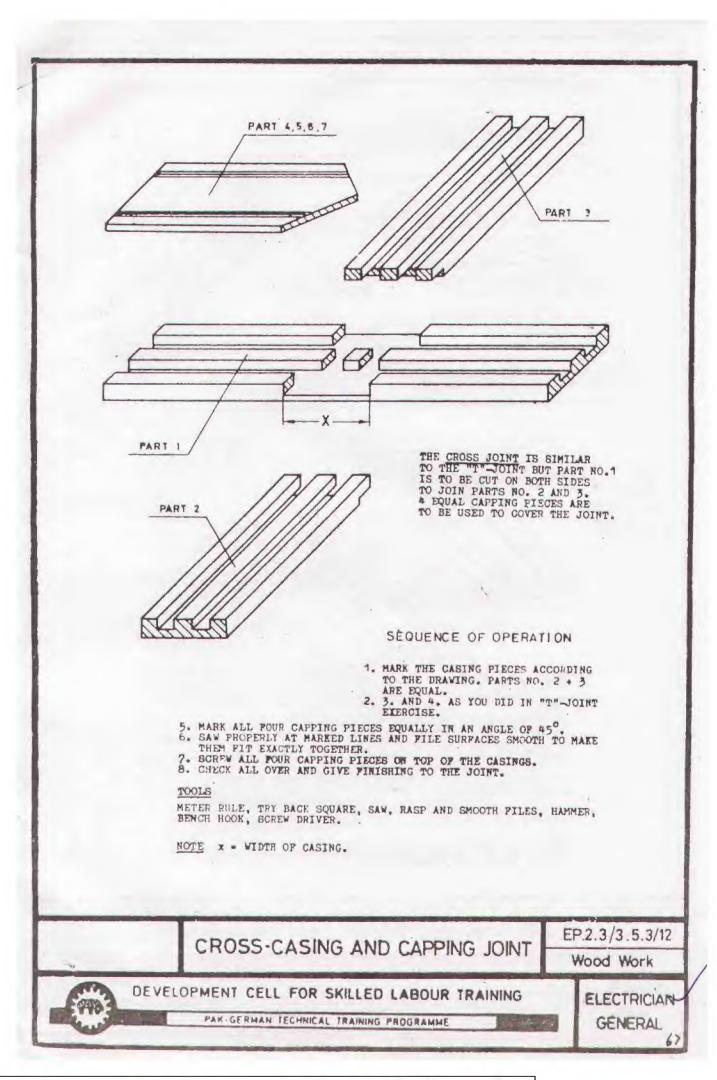


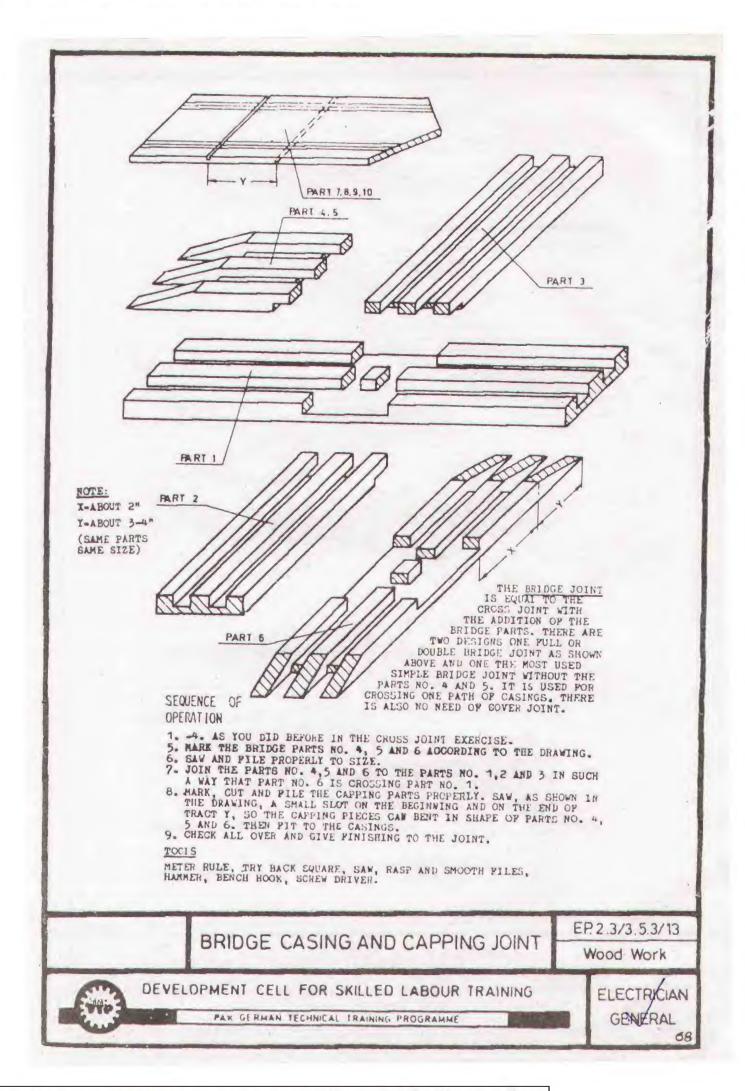


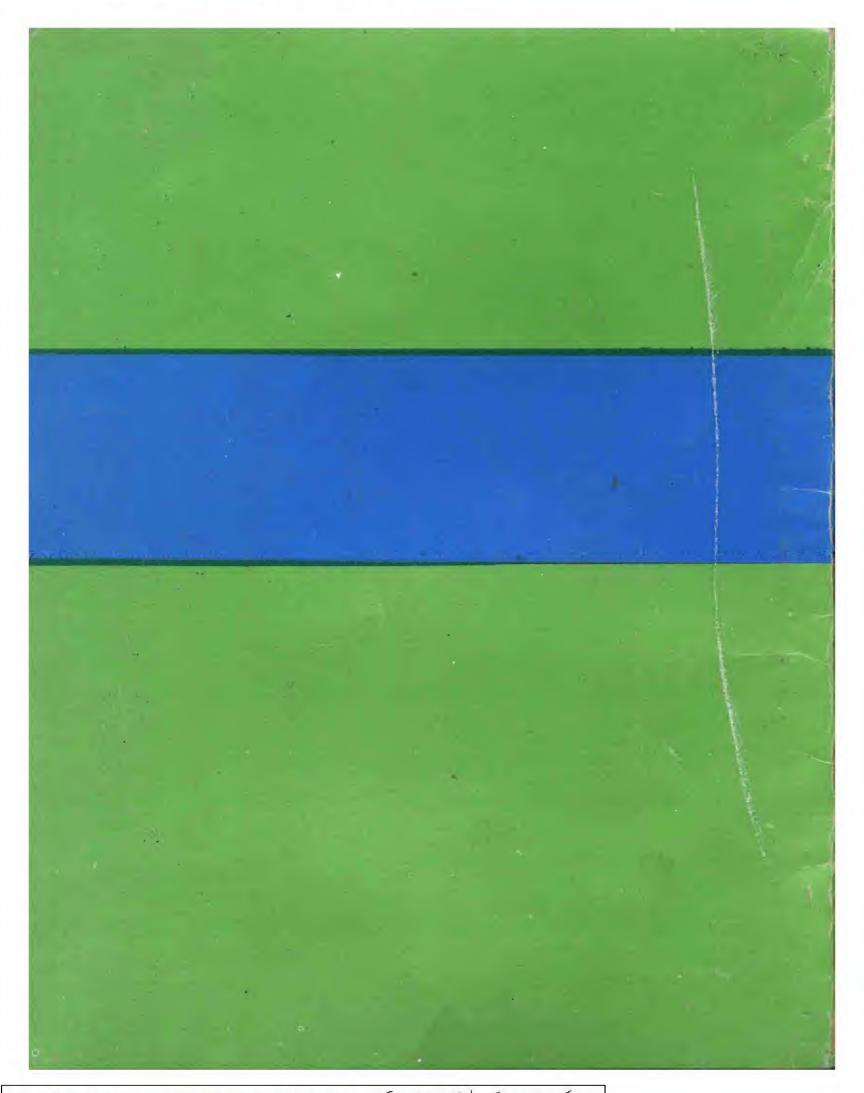












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